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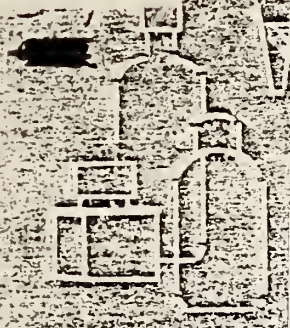

Therapeutic Guide for PHARMACEUTICALS in the PACKAGED DISASTER HOSPITAL

U.S. DEPARTMENT OF DISASTER EDUCATION AND RELIEF
25 pp.

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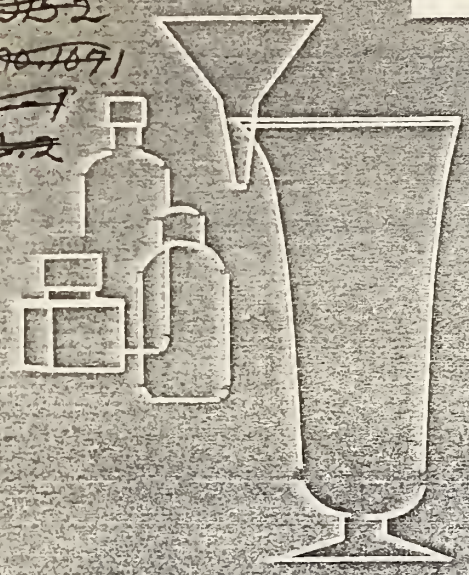

Therapeutic Guide for PHARMACEUTICALS in the PACKAGED DISASTER HOSPITAL

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service

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Health Mobilization Series C-1

Therapeutic Guide

for

PHARMACEUTICALS

in the

PACKAGED
DISASTER
HOSPITAL

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Division of Health Mobilization
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CONTENTS

In this manual the names of official drugs and their designations as "USP" or "NF" are in accordance with the *United States Pharmacopeia, Sixteenth Revision* (U.S.P. XVI) and the *National Formulary, Eleventh Edition* (N.F. XI).

INTRODUCTION

The Packaged Disaster Hospitals (PDH's) pre-positioned throughout the country contain expendable medical supplies estimated to be needed for a thirty-day operational period.

There are 97 pharmaceutical items provided in the PDH and these serve as the basis for this Therapeutic Guide. These pharmaceuticals include at least one drug for each of the life-threatening medical and surgical conditions.

The name of each item is the generic term used on labels and in the PDH listings. These names are followed by essential information, including common synonyms, trade names, and other notes where appropriate.

The format used for each item is as follows: (1) *Category;* (2) *Action;* (3) *Uses;* (4) *Cautions;* (5) *Side Effects;* (6) *Dosage;* and (7) *Similar Preparations. Similar Preparations* lists a few therapeutic equivalents which may be available in the community or carried by physicians. These may be used as a supplement to or as a substitute for the pharmaceuticals in the PDH. This is by no means an exhaustive list of items typically available but simply examples of such items.

Narcotics are not included in the PDH because of existing security regulations. Widely used narcotics are available from several sources in the community, for example: drug stores, physicians' offices, drug supply houses, or veterinary hospitals.

Tetanus antitoxin and tetanus toxoid are the only biological products available in the PDH. Additional biologicals, will be available through other National programs. Additional supplies of biologicals should also be available from sources in the community.

Extreme care should be practiced in the use of all pharmaceuticals in order to conserve the supply, to prevent adverse systemic and local reactions, to prevent cumulative effects and to prevent possible development of sensitivity. For these reasons, prescribed pharmaceuticals should be discontinued at the earliest possible time. Patients receiving any type of medicine should have their need for the medication evaluated frequently, even in a postattack emergency. Discontinuance of anti-infectious drugs should be considered when a patient has

been fever-free for 48 consecutive hours or when acute signs and symptoms have subsided.

This Guide was designed to acquaint physicians with the pharmaceutical items available in the PDH. It should be especially helpful to those physicians who have been engaged in administration, teaching, or research; to specialists who have not practiced general medicine for a number of years; and to those retired from practice who return to service in a National emergency.

It must be stressed that this Guide is in no way a substitute for the exercise of professional judgment.

PHARMACEUTICALS

ACETYLSALICYLIC ACID TABLETS, USP

0.324 Gm. (5 gr.) (Aspirin Tablets)

Category

Analgesic.

Action

Acetylsalicylic acid is readily but incompletely hydrolyzed by the alkaline reaction of the intestines, and in the blood to sodium salicylate. It produces the typical salicylate effects, such as analgesia, both before and after hydrolysis.

Uses

Acetylsalicylic acid is used to relieve pain, reduce fever, and treat gout and acute rheumatic fever. It is effective against headache, toothache, muscle pains, rheumatic and arthritic pains, and painful menstruation. It provides symptomatic relief of pain from many other causes, including the discomforts associated with colds and respiratory infections. In general, it is not very effective against pain of visceral origin.

Cautions

Extremely large doses are poisonous and may cause death. Ordinary dosages are safe except in the case of persons possessing an allergy to acetylsalicylic acid or salicylates. Such persons are usually those of general allergic and asthmatic tendency. In the event of shock reactions, skin rash, itching, or swelling, use of the drug should be discontinued.

Side Effects

Large continued doses of aspirin may produce symptoms of salicylism: ringing in the ears, mental confusion, profuse sweating, and gastrointestinal distress. Direct gastric irritation may be lessened by administering aluminum hydroxide gel tablets or a similar antacid concurrently.

Dosage

For relief of pain or reduction of fever, the adult dose is 0.3 to 0.6 Gm. (1 to 2 tablets) orally every 4 hours as necessary. For

children under 5 years the dose is 0.065 Gm. (1/5 tablet) per year of age; children 5 to 10 years can take one 0.324 Gm. tablet; consider children over 10 as adults for aspirin dosage.

In acute rheumatic fever or gout, the dose is 0.6 to 1.0 Gm. (2 or 3 tablets) given hourly until salicylism occurs (ringing in ears, dizziness) (usually requires 10 to 15 tablets), followed by 2 or 3 tablets every 4 to 6 hours for days or weeks as required.

Similar Preparations

Salicylamide, NF
Sodium Salicylate, USP

ALBUMIN, NORMAL HUMAN SERUM, USP

100 ml. bottle, with injection set

Category

Blood-volume replenisher.

Action

This blood derivative product contains 25% w/v of serum albumin and is osmotically equivalent to 5 times its own volume of normal human plasma. It restores blood volume by drawing water from the tissues. The albumin content provides blood protein.

Uses

This product is used in the treatment of shock or hemorrhage to restore blood volume. It is also used in protein replacement therapy where blood serum protein levels are low due to excessive loss, as in nephrosis, certain skin diseases, or other conditions; or due to inadequate formation of proteins resulting from nutritional disturbances, cirrhosis, or other causes.

Cautions

Since this product draws water from tissues, it should not be used in severely dehydrated patients without simultaneous administration of saline or glucose solutions. This product is not intended for long continued use. (In long-term protein replacement therapy a "salt-poor" form of serum albumin is preferred.) Serum albumin is not a replacement for blood or plasma and hence is not adequate therapy in itself for plasma loss, as in burns, or in deficiencies of specific plasma proteins. It is also not an adequate replacement for whole blood in hemorrhagic shock, and should be used only as an emergency measure. Caution should be used in administering this product to patients with normal or increased blood volume.

Side Effects

None.

Dosage

The usual dose of normal human serum albumin is 100 ml. (equivalent to 25 Gm. of albumin), the contents of one bottle, injected intravenously at a relatively rapid rate. The dose may be repeated in 15 to 30 minutes. In severe dehydration the serum albumin must be supplemented by fluids given orally or intravenously.

Similar Preparations

Dextrose Injection, USP
Dextrose and Sodium Chloride Injection, USP
Dextran Injection, 6%
Human Plasma Protein Fraction, 5% (Plasmanate)
Normal Human Plasma, USP
Polyvinylpyrrolidone Injection (PVP)
Sodium Chloride Injection, USP
Whole Blood

ALCOHOL, DENATURED

Specially Denatured Alcohol Formula No. 23H
(8 parts acetone, 1.5 parts methyl isobutyl ketone, 100 parts ethyl alcohol, by volume)

Category

Specially denatured alcohol (primarily included in the PDH for use in alcohol burners, but can be used to prepare Alcohol Rubbing Compound, NF, a rubefacient).

Action

When diluted with water to 70% alcohol concentration, it acts, when applied externally, as a mild rubefacient, counterirritant, and cooling agent. The diluted product has germicidal action.

Uses

When diluted with water to 70% alcohol concentration, it is used externally as rubbing alcohol, a soothing and cooling application and mild counterirritant. The diluted product is also useful as a skin cleansing and hardening agent.

Cautions

WARNING: This product is for external use only after proper dilution. If taken internally serious gastric disturbances will result. Keep away from eyes and other mucous membranes. Avoid prolonged breathing of vapor. Denatured alcohol is flammable; do not use near an open flame.

Side Effects

None.

Dosage

Dilute 3 parts of Specially Denatured Alcohol No. 23H with 1 part of water before using as rubbing alcohol. Use *externally* only—it is *not* for internal use. Apply sparingly with gentle rubbing action. For use as a cleansing agent or cooling application, dilute 1 part of alcohol with 3 parts of water.

Similar Preparations

Alcohol Rubbing Compound, NF
Isopropyl Alcohol, NF

ALUMINUM HYDROXIDE GEL, DRIED, TABLETS, USP

0.324 Gm. (5 gr.)

Category

Antacid.

Action

Aluminum hydroxide gel acts both as a chemical agent, neutralizing stomach hydrochloric acid, and as an adsorptive physical agent, removing toxins, gases, and bacteria in the intestinal tract.

Uses

Aluminum hydroxide gel is used in treating certain gastrointestinal ailments. It is employed in neutralizing excess stomach acid in hyperchlorhydria, particularly when associated with peptic ulcer. It is also widely used in the treatment of intestinal toxemia and is efficacious in preventing urinary calculi of phosphate origin.

Cautions

Aluminum hydroxide gel interferes with the absorption of tetracycline and its derivatives. It slows the intestinal absorption of other drugs to some extent.

Side Effects

None.

Dosage

For general gastrointestinal distress, give 0.3 Gm. (1 tablet) orally 4 times a day to hourly, as required. Doses as high as 6.5 Gm. (20 tablets) may be given at one time in cases of acute peptic ulcer.

Similar Preparations

Aluminum Phosphate Gel, NF
Magnesium Trisilicate, USP
Sodium Bicarbonate, USP

ATROPINE SULFATE OPHTHALMIC OINTMENT, 1%

Category

Mydriatic.

Action

Used in the eye, atropine dilates the pupil (mydriasis) and renders the iris insensitive to light. It also paralyzes accommodation (cyclopegia), the lens being adjusted for far vision.

Uses

Atropine sulfate eye ointment is used in the treatment of inflammation of the cornea or iris and various other eye conditions in which relaxation of the eye muscles will be of benefit. Following eye injuries, it is used to retard or prevent adhesion of the iris to the cornea or lens (synechia). It is also employed for paralyzing the ciliary muscle to facilitate ophthalmoscopic examination.

Cautions

Atropine sulfate produces an increased intraocular pressure and may cause an attack of glaucoma in susceptible individuals, particularly elderly persons. Its use should be discontinued if increased pressure occurs during treatment. Dark glasses should be worn during treatment of the eyes with atropine, as the dilation of the iris causes sensitiveness to light.

Side Effects

Atropine eye ointment causes photophobia, because of the irresponsive pupil, and micropsia, from the loss of accommodation. In sensitive individuals, increased intraocular tension, conjunctivitis, and edema of the eyelid may occur. Indiscriminate use may cause systemic poisoning with such symptoms as headache, dryness of the mouth, and heart palpitation.

Dosage

A small amount of the ointment is applied to the conjunctiva of the eye 2 or 3 times daily as needed to keep the pupil dilated.

Similar Preparations

Cyclopentolate, USP (Cyclogyl)
Eucatropine Hydrochloride, USP
Homatropine Hydrobromide, USP
Scopolamine Hydrobromide, USP

ATROPINE SULFATE TABLETS, USP

0.4 mg. (1/150 gr.), Hypodermic

Category

Parasympatholytic.

Action

Atropine produces a blocking action on parasympathetic nerve fibers. Its action on the central nervous system causes respiratory stimulation and selective sedation. Its parasympathetic blocking action depresses the action of smooth muscles and secretory glands.

Uses

Atropine is used for: relaxation of the gastrointestinal, biliary and genitourinary tracts; suppression of salivary, gastric and respiratory tract secretions; prophylaxis of fainting from heart block or hypersensitive carotid sinus and treatment of parkinsonism. Its antispasmodic action is employed in treating various spastic conditions of the bowel and to relax bronchial muscles in attacks of bronchial asthma. The inhibitory effect on mucous secretions makes atropine useful in asthma, acute coryza, hay fever, and rhinitis. Atropine is almost routinely employed prior to inhalation anesthesia to inhibit excess salivation or bronchial secretions. It is also employed as a mydriatic and cycloplegic in ocular inflammation and as an antiemetic in motion sickness.

Atropine sulfate is also used as an antidote for nerve gas poisoning. For this purpose an injectable solution of the drug in a collapsible tube with attached sterile needle or in an automatic injection device is ordinarily used.

Cautions

Large doses may cause excessively rapid heartbeat, rapid breathing, skin rash, delerium, fever, stupor, coma, respiratory failure, or death. Pilocarpine is useful as an antidote if these reactions occur. The use of atropine is contraindicated in patients over 40 years of age (because of the danger of precipitating glaucoma); its use is also to be avoided in patients with heart disease, prostatic hypertrophy, or existing glaucoma.

Side Effects

Average doses may cause dryness of the mouth, flushing, dilation of the eye, blurred vision, and urinary retention. If only moderate in severity, these symptoms may be considered as normal reactions to atropine.

Dosage

May be given orally as whole tablets or may be dissolved in sterile water for injection and given subcutaneously, intramuscularly, or intravenously. The usual dose is 0.4 mg. (1 tablet), although as

much as 1.2 mg. (3 tablets) may be used per dose in certain conditions. For ophthalmic use a 0.5% to 1% solution may be prepared from the tablets for topical use in the eye. For nerve gas poisoning the usual dose is 2 mg. given immediately at the first onset of symptoms.

Similar Preparations

Belladonna Tincture, USP
Hyoscyamine Hydrobromide, NF
Scopolamine Hydrobromide, USP

BACITRACIN OINTMENT, USP

500 Units per Gm.

Category

Antibiotic.

Action

Bacitracin inhibits the growth of many gram-positive organisms, such as streptococci, staphylococci, and pneumococci, and a few gram-negative organisms such as gonococci and meningococci. It also has bacteriostatic action toward tetanus and diphtheria bacilli.

Uses

The ointment is used as a topical anti-infective in the treatment of many skin conditions such as impetigo and various forms of dermatitis. It is also useful in the external treatment of infected wounds, burns, ulcers, and abscesses. It is frequently used for the prevention of infection in minor cuts and abrasions.

Cautions

Bacitracin is essentially non-toxic and has low sensitizing power when used externally. Allergic reactions are very rare, but use should be discontinued if irritation occurs. This product is not intended for use in the eye.

Side Effects

None.

Dosage

Cleanse the affected area and apply a thin film of the ointment 2 or 3 times a day.

Similar Preparations

Chlortetracycline Ointment
Neomycin Ointment
Oxytetracycline Ointment
Tetracycline Ointment

BARIUM SULFATE, USP

Category

Radiopaque medium (alimentary).

Action

An insoluble salt highly opaque to X-rays. It has no pharmacologic action.

Uses

Barium sulfate is used in roentgenography and fluoroscopy as a contrast medium for visualization of the gastrointestinal tract.

Cautions

When barium sulfate is prescribed, the title should always be written out in full to avoid confusion with the poisonous barium sulfide or barium sulfite. Barium sulfate used internally should always be of USP medicinal quality, free from soluble barium salts.

Side Effects

None.

Dosage

For X-ray examination of the stomach, a dose of a suitable cathartic is given the evening before. The following morning 60 Gm. (2 oz.) of barium sulfate suspended in about 400 ml. (¾ pint) of water is administered orally. The examination is given about 6 hours later. The patient abstains from food from the previous evening until after the examination.

For X-ray examination of the colon, 250 Gm. (8 oz.) of barium sulfate suspended in about 1500 ml. (3 pints) of water warmed to body temperature is given by enema. Various additions to the enema such as mucilage of acacia and condensed milk may be used to improve the suspension of the barium sulfate.

Similar Preparations

None in current use.

BENZALKONIUM CHLORIDE SOLUTION, USP, 10%

Category

Local anti-infective.

Action

Benzalkonium chloride is a quaternary ammonium compound which is a rapid-acting, non-irritating, cationic, surface-active agent. The solution is a powerful germicide for many pathogenic nonsporulating bacteria.

Uses

Benzalkonium chloride solution, 10%, diluted with 70% alcohol to form a tincture, or with water to form a dilute aqueous solution, is used as an all-purpose local antibacterial agent for topical use.

Cautions

The product is for external use only and must be properly diluted before use. The 10% solution is poisonous if taken internally.

The tincture or aqueous solution cannot be relied upon to kill clostridial spores. It is inactivated by soap and other anionic surface-active agents; therefore, the skin or other surface to be disinfected must be thoroughly rinsed to remove any residual soap before using benzalkonium chloride.

The tincture should be used only on areas where alcoholic content will not produce irritation. Tincture should not be used in conjunction with or following the use of hexachlorophene soap or other hexachlorophene products, as the alcohol in the tincture reduces the germicidal effectiveness of the hexachlorophene.

Dosage

Before use, the 10% solution must be diluted with 70% alcohol (or an aqueous solution of 50% alcohol and 10% acetone) to form a tincture, or with water to make a dilute aqueous solution. One part of the 10% solution made up to 100 parts with diluent makes a 1:1000 tincture or solution.

For preoperative disinfection of unbroken skin or the treatment of superficial injuries or fungus infections, a 1:1000 tincture is applied topically in moderate amounts as required.

For the following uses an aqueous (non-alcoholic) solution of the indicated concentration is employed:

Preoperative disinfection of mucous membranes or denuded skin, 1:10,000 to 1:2000;

Instillation in, or irrigation of the eye or vagina, 1:5000 to 1:2000;

Irrigation of widely denuded surfaces, 1:10,000 to 1:5000;

Irrigation of the urinary bladder and urethea, 1:20,000;

Retention lavage of the bladder, 1:40,000;

Disinfection of deep lacerations, 1:1000;

Irrigation of infected deep wounds, 1:3000;

Treatment of infected denuded areas with wet dressings, 1:5000;

Sterile storage of metallic instruments and rubber articles, 1:1000 (with 0.5% sodium nitrite added as a corrosion inhibitor in the case of metal articles).

Similar Preparations

Benzethonium Chloride, USP
Cetylpyridium Chloride, USP
Methylbenzethonium Chloride, USP
Povidone-Iodine
Thimerosal, NF (Merthiolate)

BISMUTH SUBCARBONATE TABLETS, NF

0.324 Gm. (5 gr.)

Category

Antacid; astringent.

Action

Bismuth subcarbonate, being essentially insoluble, has a protective coating action on inflamed mucous surfaces of the gastrointestinal tract, as well as an adsorptive action. The slight solubility in stomach acid provides a slow antacid and astringent action. It is an effective nonirritant intestinal antiseptic.

Uses

Bismuth subcarbonate tablets are used in treating digestive disorders. They are effective in allaying diarrhea and gastritis, in treating gastric ulcers, and as an adjuvant in treating intestinal amebiasis. They also are useful in enteritis, dysentery, and ulcerative colitis.

Cautions

None when used orally.

Side Effects

May be moderately constipating in large doses.

Dosage

The usual dose is 1 Gm. (3 tablets) 4 times a day. However, up to 2 Gm. (6 tablets) every 2 to 4 hours may be given as required to control diarrhea. For gastric ulcer, 1 to 2 Gm. (3 to 6 tablets) with fluid before each meal is usual.

Similar Preparations

Aluminum Hydroxide Gel, USP
Bismuth Magma, NF
Bismuth Subnitrite, NF
Magnesium Trisilicate, USP

BORIC ACID OPHTHALMIC OINTMENT, 5%

Category

Antibacterial.

Action

Boric acid possesses fungistatic and feeble bacteriostatic properties.

Uses

Boric acid ophthalmic ointment is a bland, nonirritating eye ointment useful in treating chemical or heat burns to the eyelid. It can also be used as a soothing application for minor irritations

to the eye, such as those caused by smoke, fumes, or gaseous chemicals. It may also be employed externally in areas other than the eye for the treatment of minor skin irritations.

Cautions

Boric acid and any of its preparations should be used externally only and applied only to intact, unbroken skin. Boric acid is toxic upon ingestion or absorption.

Side Effects

None.

Dosage

Apply the ointment sparingly to eyelids, conjunctiva, or other affected area.

Similar Preparations

Chlortetracycline Ophthalmic Oointment
Oxytetracycline-Polymyxin B Ophthalmic Oointment
Tetracaine Ophthalmic Ointment
Tetracycline Opthalmic Ointment

CALCIUM CHLORIDE INJECTION, USP, 10%

10 ml. ampul

Category

Electrolyte replenisher; cardiotonic.

Action

Calcium chloride injection administered intravenously in small amounts has a cardiotonic action. Larger doses produce depression of cardiac function. The injection also has an antispasmodic and anticonvulsant action on smooth muscle and an anti-allergic action in serum sickness.

Uses

Calcium chloride injection is used to treat impending or actual ventricular standstill during operations. It is also effective in the treatment of tetany resulting from a low calcium ion concentration in the blood from any cause. It is useful in the prevention and treatment of anaphylaxis from the injection of foreign proteins, such as antitoxins and antisera, and in the treatment of poisoning from a number of substances, including magnesium, lead, and carbon tetrachloride.

Cautions

This product should be used only by physicians thoroughly familiar with its actions. It is for intravenous or intraventicular use only and should never be injected subcutaneously or intramuscularly. Its intravenous use requires great caution because

of the danger of serious depression of cardiac function and of causing thrombophlebitis of the vein. The injection rate should not exceed 1 ml. per minute. It should not be injected into digitalized patients nor those demonstrating ventricular fibrillation.

Side Effects

Upon injection, this product may produce various cardiac effects, lowering of the blood pressure, peripheral vasodilation, a cutaneous burning sensation, and symptoms of hypercalcemia (anorexia, weakness, depression, polyuria, vomiting, and diarrhea).

Dosage

For treating impending or actual cardiac arrest during operations (particularly after epinephrine has failed), inject 2 to 4 ml. of the 10% injection into the left ventricular cavity.

For intravenous use, a 5% aqueous injectable solution is usually used. It is administered at a rate not exceeding 1 ml. per minute until the required dose has been given (1 to 2 Gm.).

Similar Preparations

Calcium Gluconate Injection, USP
Calcium Levulinate Injection

CASCARA SAGRADA EXTRACT TABLETS, NF

0.25 Gm. (4 gr.)

Category

Cathartic.

Action

Cascara sagrada is an "irritant" type cathartic, acting chiefly by exciting peristalsis in the colon. A therapeutic dose usually causes a single evacuation of the bowel in about 8 hours.

Uses

Cascara sagrada extract is used chiefly for chronic constitpation.

Cautions

Although classed as a "mild" cathartic, large doses may cause an inflammatory condition in the gastrointestinal tract. This product (or any other laxative or cathartic) should *not* be administered if the patient exhibits any possible symptoms of appendicitis: pain in the umbilical region, anorexia, nausea, vomiting, pain or tenderness in the abdomen particularly in the lower right quadrant. Its use should also be avoided in the presence of any other acute abdominal condition e.g., intestinal obstruction or acute diverticulitis.

Side Effects

Discomfort or griping are infrequently produced after use.

Dosage

The usual dose is 0.25 Gm. (1 tablet) at bedtime, although 0.5 Gm. (2 tablets) may be given if required. In cases of severe chronic constipation, one tablet 3 times a day after meals may be prescribed.

Similar Preparations

Aromatic Cascara Sagrada Fluidextract, USP
Cascara Sagrada Fluidextract, NF
Castor Oil, USP
Magnesium Sulfate, USP
Petrolatum, Liquid, USP

CHLORAMPHENICOL CAPSULES, USP

0.25 Gm. (4 gr.) (Chloromycetin Capsules)

Category

Antibiotic.

Action

Chloramphenicol has a wide spectrum of antibacterial activity which includes many gram-negative bacteria and rickettsiae. It is the most effective of the antibiotic drugs against typhoid fever and certain other severe infections.

Uses

This drug is used in the treatment of typhoid fever; Rocky Mountain spotted fever; epidemic, murine and scrub typhus; rickettsialpox; Q fever; and psittacosis-lymphogranuloma–type viruses. Chloramphenicol is also effective in many other infections, but its use in these has been discontinued because of its potential danger.

Cautions

Chloramphenicol should be used only for serious infections caused by susceptible organisms and should not be employed in the treatment of infections amenable to drugs with less dangerous potential toxicity. Use of this drug may cause bone marrow injury with resulting hematopoietic disturbances (thrombocytopenia, granulocytopenia, or aplastic anemia). A number of fatalities have occurred in predisposed individuals, and although the number of such individuals is few, they cannot be predicted. Accordingly, the risk involved in the use of chloramphenicol should be tolerated only when the seriousness of the infection and lack of other suitable medication warrant its use. Extended use, as with other antibiotics, may result in an overgrowth of microorganisms not susceptible to the drug, particularly certain *fungi*.

Patients using chloramphenicol should be kept under constant surveillance, and the therapy should be discontinued at the first sign of any hemolytic effect. However, peripheral blood studies cannot be relied upon to detect bone marrow depression early enough to prevent irreversible changes.

Side Effects

Use of chloramphenicol may produce a number of untoward effects including transient mild euphoria, skin rash, nausea and vomiting, abdominal cramps, slight diarrhea, other gastrointestinal disturbances, weakness in the legs, coolness of the skin, and dryness or a persistent bitter taste in the mouth. Occasionally glossitis, stomatitis, pharyngitis, and, very rarely, optic neuritis may result from chloramphenicol therapy.

Dosage

The usual dose for adults is 0.5 Gm. (2 capsules) every 6 hours, orally, until the temperature returns to normal for 24 hours. In severe infections, an initial dose of 50 to 70 mg. per kg. of body weight may be used, followed by 0.25 to 0.50 Gm. every 3 hours until the temperature returns to normal. The dosage is then reduced, and the drug is discontinued after body temperature remains normal for 48 hours.

For children, the usual dosage is 50 to 100 mg. per kg. of body weight daily in 4 to 6 divided doses, decreasing the amount after the infection is under control.

For children under one month, the daily dose for full-term infants should not exceed 50 mg. per kg. of body weight; and for premature infants, 25 mg. per kg. of body weight.

Similar Preparations

Chlortetracycline Hydrochloride, NF (Aureomycin)
Erythromycin, USP
Neomycin Sulfate, USP
Oxytetracycline Hydrochloride, NF (Terramycin)
Penicillin G, USP
Streptomycin Sulfate, USP
Tetracycline Hydrochloride, USP

CHLOROFORM, USP

Category

General anesthetic.

Action

Inhalation of chloroform vapor produces paralysis of the central nervous system in various stages. As with nearly all general

anesthetics, depression of the cortex, the basal ganglia and cerebellum, the spinal cord, and the medulla occur in order. Surgical anesthesia is accomplished when both the sensory and motor functions of the spinal cord are sufficiently affected to dull spinal reflexes and obtain skeletal relaxation.

Uses

Chloroform is used as an anesthetic by inhalation.

Cautions

WARNING: Chloroform should be administered only by a competent anesthetist. It is the most potent of all inhalation anesthetics and possesses a narrow margin of safety between surgical anesthetic level and death. Respiration and circulation may fail simultaneously.

Chloroform is contraindicated in patients with hepatic, cardiac, or renal disease, and also in those with anemia, acidosis, or diabetes. Although chloroform is nonflammable, it should not be vaporized in the presence of a naked flame because of the production of harmful gases (hydrogen chloride and phosgene).

Side Effects

Use of chloroform as an anesthetic may produce hypotension, respiratory and myocardial depression, ventricular arrhythmias, fibrillation, renal and hepatic damage, hyperglycemia, nausea, vomiting, and pulmonary irritation.

Dosage

Chloroform may be administered either by the open method, dropwise on a few layers of gauze supported by a frame a short distance from the patient's nose and mouth, or the closed method, employing a rebreathing-type anesthesia machine. A semiclosed method, employing an anesthesia apparatus but using a mask which permits respiration outside the system, can also be applied in chloroform anesthesia.

In the open method, the rate of administration should never exceed 60 drops per minute, and usually should not be over 12. After the anesthetic stage has been induced, 6 drops per minute will usually suffice for maintenance.

Similar Preparations

Cyclopropane, USP
Ether, USP
Ethylene, USP
Halothane (Fluothane)
Nitrous Oxide, USP
Trichloroethylene, USP
Vinyl Ether, USP

CHLORPROMAZINE HYDROCHLORIDE INJECTION

25 mg. (3/8 gr.) per ml., 2 ml. ampul
(Thorazine HCl Injection)

Category

Tranquilizer.

Action

Chlorpromazine produces moderate sedative effects without clouding consciousness. It suppresses conditioned reflexes, relieves agitation and aggressive drives in various psychoses, suppresses certain forms of vomiting and hiccups, and controls pain in malignant diseases. It also has rather weak adrenolytic, hypotensive, antispasmodic, hypothermic and antihistaminic effects, and potentiates the action of many other pharmacological agents.

Uses

Chlorpromazine hydrochloride injection is used to treat bedfast or hospitalized patients in the acute excitement phases of manic or schizophrenic disorders, quieting the motor manifestations, the aggressiveness and the hallucinations. It is useful in the treatment of anxiety, tension, agitation, and in lessening motor activity in both psychoneurotics and psychotics. It is also effective in the treatment of acute alcoholism, delerium tremens, intractible hiccup, and nausea and vomiting from various causes (including nausea of radiation sickness). It is not effective against motion sickness, however.

Cautions

Chlorpromazine hydrochloride injection should be reserved for bedfast patients. If used in ambulatory patients, the patient must remain in a supine position for at least one hour after the injection.

Orthostatic hypotension occurs frequently, so that caution is necessary in patients with cardiovascular disease, arteriosclerosis, or hepatic disease. To counteract this effect it may be necessary to inject pressor agents, such as phenylephine or levarterenol (*not* epinephine).

If jaundice or agranulocytosis occurs, the drug should be stopped immediately.

Chlorpromazine potentiates the action of many drugs, including sedatives, hypnotics, analgesics, and anesthetics; hence it should be used with caution in the presence of these agents.

Side Effects

Although the direct toxicity of chlorpromazine is relatively low, side effects are various and quite commonly experienced by patients. These are generally minor and may be disregarded except for those mentioned under *Cautions* above. The side effects in-

clude: drowsiness, bitter taste, vivid dreams, constipation, urticaria, postural hypotension, pyrosis, oliguria, ataxia, sensitization dermatitis, tachycardia, hypothermia, dryness of the mouth, and photosensitivity.

Dosage

Dosage is extremely variable and requires strict individualization. Injection may be either intramuscular or intravenous, although the latter is more likely to produce severe hypotension. The usual effective dose by injection is 25 mg. (1 ml.) daily, but may vary with individuals from 15 mg. to 1 Gm.

For arresting hiccup, 50 mg. (2 ml.) intravenously is generally effective. With debilitated patients the use of only 25 mg. by vein and 25 mg. intramuscularly is advisable.

As an antiemetic, intramuscular injection is usually used.

Similar Preparations

Chlorpromazine Hydrochloride Tablets, USP
Mepazine Hydrochloride (Pacatal)
Perphenazine (Trilafon)
Prochlorperazine Ethanedisulfonate, USP (Compazine Ethanedisulfonate)
Prochlorperazine Maleate, USP (Compazine Dimaleate)
Promazine Hydrochloride (Sparine)
Rescinnamine, NF (Moderil)
Thioprozate Hydrochloride (Dartal)
Trifluprομazine Hydrochloride (Vesprin)
Trimeprazine Tartrate (Temaril)

CHLORPROMAZINE HYDROCHLORIDE TABLETS, USP

25 mg. (3/8 gr.) (Thorazine HCl Tablets)

Category

Tranquilizer.

Action

Chlorpromazine is a phenothiazine derivative. It is the most potent of the tranquilizing drugs currently available. (Also see *Chlorpromazine Hydrochloride Injection* for further details of its action.)

Uses

Chlorpromazine hydrochloride tablets may be used in the treatment of the same disorders for which chlorpromazine hydrochloride injection is used, but where less dramatic action is required. The tablet form is usually used for ambulatory patients and in cases where long continued therapy is required. In most cases, oral administration is as effective as parenteral administration of the drug, provided vomiting is absent.

Cautions

The same precautions as given under *Chlorpromazine Hydrochloride Injection* are applicable to oral administration of this drug.

Side Effects

Oral administration of chlorpromazine may produce any of the side effects listed under *Chlorpromazine Hydrochloride Injection.*

Dosage

Dosage is extremely variable and requires strict individualization. The usual effective oral dose is 100 mg. (4 tablets) daily, divided into partial doses every 6 to 8 hours. However, daily doses as small as 10 mg. may be effective, or as much as 1 Gm. per day may be required in individual cases.

Similar Preparations

See list under *Chlorpromazine Hydrochloride Injection.*

DEXTRAN INJECTION, 6%

500 ml. bottle, with injection set

Category

Non-protein plasma extender.

Action

This product expands plasma volume when injected intravenously. It has colloidal pressure similar to plasma and a considerable portion remains in circulation in the blood stream for several days.

Uses

Dextran is intended for emergency use in the treatment of hemorrhage or traumatic or burn shock.

Cautions

Dextran is not a replacement for whole blood or blood derivatives. It is intended for emergency use only as a life-saving measure when blood or blood derivatives are not essential.

Repeated dosages of dextran may be sensitizing in a few individuals and subsequent injections may be potentially dangerous. Rapid injection of this product into patients with normal or excessive blood volume may cause cardiac dilation and death.

Treatment of shock in patients with renal shutdown or heart disease must be managed carefully when there is danger of congestive heart failure and pulmonary edema.

Side Effects

Generally none is encountered, although a few patients may experience mild urticaria. More severe reactions, such as generalized urticaria, chest tightness, wheezing, hypotension, nausea, vomit-

ing, or symptoms of anaphylactoid reaction generally call for the cessation of the use of dextran.

Dosage

The usual dose of dextran injection is 500 ml. (the contents of one bottle). Repeated injections can be given when required by loss of blood volume, when blood or blood derivatives are not essential. The solution should be administered intravenously at a rate of 20 to 40 ml. per minute.

Similar Preparations

Dextrose Injection, USP
Dextrose and Sodium Chloride Injection, USP
Human Plasma Protein Fraction, 5% (Plasmanate)
Normal Human Plasma, USP
Normal Human Serum Albumin, USP
Polyvinylpyrrolidone Injection (PVP)
Sodium Chloride Injection, USP
Whole Blood

DEXTROSE AND SODIUM CHLORIDE INJECTION, USP

1000 ml. bottle

Category

Fluid, nutrient, and electrolyte replenisher.

Action

This is a hypertonic solution which contains 5% dextrose in normal saline. It supplies a nutrient, an electrolyte, and water to the body when injected intravenously. The dextrose (glucose) is an easily metabolized carbohydrate and an antiketogenic agent increasing liver glycogen. The hypertonicity of the solution maintains the increase in circulating blood volume.

Uses

This product is used for the treatment of dehydration, particularly when accompanied by starvation acidosis; as a nutrient fluid in protracted vomiting or diarrhea; as a hypertonic solution for use in shock, peripheral circulatory collapse or cerebral edema, and to produce mild diuresis. See *Dextrose Injection, 5%, and Sodium Chloride Injection.*

Cautions

In fasting patients with good renal function and particularly in digitalized patients, sufficient potassium should be added to the

solution to prevent hypopotassemia or significant shifts of intracellular potassium. See *Potassium Chloride Solution.* Administer with caution to patients requiring a restricted sodium intake; use *Dextrose Injection, 5%* if possible.

Prolonged parenteral nutrition with sugar solutions may overtax body production of insulin, so that the latter should be added to the solutions under such conditions.

Side Effects

See *Cautions* above.

Dosage

The usual dose of this product is 500 ml. (one-half bottle) administered intravenously at a slow rate of 3 to 5 ml. per minute (1 to 2 drops per second). The total dose may be as little as 100 ml. or as much as 1,000 ml. according to the needs of the patient. The dose may be repeated as required, but in no case should the total dose exceed 5,000 ml. in 24 hours.

Similar Preparations

Dextrose Injection, USP, 5%
Lactated Ringer's Injection, USP
Ringer's Injection, USP
Sodium Chloride Injection, USP

DEXTROSE INJECTION, USP, 5%

1000 ml. bottle

Category

Fluid and nutrient replenisher.

Action

This is an isotonic solution which supplies a nutrient and water to the body when injected intravenously.

Uses

This product is used for increasing blood volume as may be required by circulatory failure due to hemorrhage or surgical shock; for counteracting dehydration due to disease, excessive vomiting, diarrhea, lack of fluid intake, or fever: for maintaining caloric intake; and for treating mild hypoglycemia due to insulin overdosage or other causes. Dextrose is also frequently administered with insulin in treating diabetic coma. Dextrose injection, 5%, is sometimes employed as a vehicle for administering certain drugs by continuous infusion.

Cautions

This solution, which is electrolyte-free, is contraindicated for use conjointly with blood in the presence of overhydration, in most neurosurgical procedures, in the presence of intracranial or intraspinal hemorrhage, and in sodium-depleted patients.

See *Cautions* under *Dextrose and Sodium Chloride Injection.*

Side Effects

See *Dextrose and Sodium Chloride Injection.*

Dosage

See *Dextrose and Sodium Chloride Injection.*

Similar Preparations

Dextrose and Sodium Chloride Injection, USP
Lactated Ringer's Injection, USP
Ringer's Injection, USP
Sodium Chloride Injection, USP

DEXTROSE INJECTION, USP, 10%

3 ml. ampul

Category

Diluent for spinal anesthetics.

Action

Solutions of spinal anethetics prepared with 10% dextrose injection as diluent are heavier than spinal fluid (hyperbaric). This enables the anesthetist to control the area of anesthesia by adjusting the position of the patient.

Uses

Dextrose injection, 10%, is used as the diluent for spinal anesthetics (particularly tetracaine hydrochloride) to produce hyperbaric solutions.

Cautions

See *Tetracaine Hydrochloride for Injection.*

Side Effects

See *Tetracaine Hydrochloride for Injection.*

Dosage

Used only as a diluent to prepare spinal anesthetics. See *Tetracaine Hydrochloride for Injection*

Similar Preparations

For hyperbaric solutions: None.
For hypobaric solutions:
Sodium Chloride Injection, USP
Sterile Water for Injection, USP

DEXTROSE INJECTION, USP, 50%

50 ml. ampul

Category

Dehydrating agent and diuretic.

Action

When injected intravenously, the extreme hypertonicity of 50% dextrose injection causes abstraction of water from tissues into the blood and a subsequent increase in the output of urine.

Uses

This product is used in the treatment of cerebral edema, hypoglycemic shock (insulin shock), circulatory collapse, and pulmonary edema. Other minor uses include the sclerosing of varicose veins and the treatment of acute alcoholism.

It can also be diluted with water for injection to lower concentrations for other therapy in which the use of dextrose is indicated.

Cautions

Dextrose injection, 50%, should be administered very slowly so as not to cause a significant rise in the osmotic tension of the blood at the injection site, as this may lead to local phlebitis. Its use is contraindicated in the presence of marked impairment of renal function.

Side Effects

Dextrose may appear in the urine after administration of this product.

Dosage

The usual dose of dextrose injection, 50%, as a diuretic is 50 ml. (the contents of one ampul) administered slowly by intravenous injection. For the treatment of hypoglycemia, 10 to 25 ml. of the 50% injection (or 25 to 50 ml. of a 25% injectable solution) are ordinarily used, with repetition of the dose as required.

Similar Preparations

Mannitol Injection, NF

Mercaptomerin Sodium, USP (Thiomerin)

DIGITOXIN TABLETS, USP

0.1 mg. (1/600 gr.)

Category

Cardiotonic.

Action

Digitoxin is the primary active glycosidal ingredient of *Digitalis,* USP, and therefore has essentially the same physiological actions as digitalis leaf *(purpura).* Its main pharmacodynamic action is to increase the force of myocardial contraction. Other secondary effects produced on the heart and circulatory system by digitalis or digitoxin as the result of the increased force of the systole are: slowing of the heart rate, increase in cardiac output, decrease in cardiac enlargement, and reduction in elevated venous pressure.

Uses

The chief therapeutic use of digitoxin is in the treatment of congestive heart failure. It is also effective in treating auricular fibrillation and auricular tachycardia. It is most effective in heart failures brought on by chronic degenerative processes such as arteriosclerosis or hypertensive heart disease. It is less effective in cases resulting from acute toxic or infectious processes, like typhoid or diphtheritic myocarditis. Congestive failures in patients with myxedema, hyperthyroidism and thiamine deficiency are likewise not much benefited by digitalis therapy.

Cautions

The dosage of digitoxin must be carefully controlled and individualized to produce the desired therapeutic effects without producing toxic symptoms. Slight overdosages result in the characteristic manifestations of digitalis intoxication: anorexia, nausea, vomiting, headaches, a pulse rate below 50, or heart irregularities. Dosage should be reduced if such symptoms appear. Since the quantity of digitalis (or derivatives) present in the body determines the response, digitoxin should be administered with care to patients who have received any cardiac drugs during the previous two weeks. Patients taking digitalis should not be given intravenous calcium, ephedrine, or quinidine. Doses equivalent to 3 times the effective therapeutic dose may prove fatal, but if digitoxin is administered orally in divided doses, lethal concentrations in the body are seldom reached because of the emetic action.

Side Effects

Any of the symptoms of digitalis intoxication may occur upon rapid digitalization or upon the administration of excessive maintenance doses. These effects are reversible upon discontinuance or reduction of the drug.

Digitalis intoxication may also occur in digitalized patients when the concentration in the body rises sharply due to sudden large water loss, as, for example, following diuresis in a severely edematous patient (especially when concommitant loss of potassium occurs).

Dosage

The usual initial digitalization dose (for patients who have received no digitalis-like drug during the previous 2 weeks) is 1.2 mg. (12 tablets), administered preferably in divided doses of 0.6 mg., 0.4 mg., and 0.2 mg., 3 to 6 hours apart. The patient should be watched carefully to determine that such dosage has produced the desired therapeutic effect without the production of toxic symptoms, especially prior to administering the third dose. Some patients may require somewhat more or somewhat less to attain the proper level.

The maintenance dose for most patients is 0.1 mg. (1 tablet) daily, although some may require 0.2 mg. (2 tablets) daily.

Once a digitalis preparation has been required to alleviate congestive heart failure, the routine use of a maintenance dose throughout the life of the patient is ordinarily required.

Similar Preparations

Deslanoside, USP
Digitalis, USP
Digoxin, USP
Lanatoside C, NF

DIGOXIN INJECTION, USP

0.25 mg. (1/250 gr.) per ml., 2 ml. ampul

Category

Cardiotonic.

Action

Digoxin is a cardiotonic glycoside obtained from the leaves of *Digitalis lanata.* Its actions are similar to USP Digitalis *(D. purpurea)* and digitoxin, except that the duration of action is only one-third or less as long as digitoxin.

Uses

Digoxin injection is used to produce very rapid digitalization. Its action when used intravenously becomes evident in 5 to 30 minutes. This product is indicated for use only when extremely rapid digitalization is required, as in pulmonary edema from

acute left ventricular failure. All regular cardiotonic requirements should be met by the use of an oral preparation where possible. (See *Digitoxin Tablets.*) In cases where coma, vomiting, or other conditions preventing oral medication are preesnt, digoxin injection may be used.

Cautions

Do not use this preparation except in extreme emergencies or when oral administration of a required cardiotonic is contraindicated as described under *Uses* above. The dose must be carefully determined and the facts about previous digitalis medication must be known. Indiscriminate use may be rapidly fatal. Digoxin is extremely poisonous. Use intravenously only; do not inject subcutaneously on intramuscularly.

Side Effects

Any of the symptoms of digitalis intoxication may occur (anorexia, nausea, vomiting, headache, slow pulse rate, heart irregularities). Dosage should be reduced if such symptoms appear.

Dosage

The usual initial digitalization dose (for patients who have received no digitalis-like drug during the previous 2 weeks) is 1 mg. (4 ml.) given intravenously either as the undiluted injection or diluted with sodium chloride injection. The injection should be given slowly over a period of 5 to 10 minutes. The usual maintenance dose, if therapy must be continued intravenously, is 0.5 mg. daily in divided doses (usually one-fourth every 6 hours).

As with all digitalis preparations, individual responses vary, so that for initial digitalization, 0.5 mg. to 1.5 mg. may be required. Except in cases of extreme emergency, fractionation of the dose is advisable. For this procedure 0.5 mg. (2 ml.) is given initially and 0.125 mg. (½ ml.) is given at 2-hour intervals until a satisfactory level of digitalization is reached.

Similar Preparations

Deslanoside Injection, USP
Digitoxin Injection, USP

DIPHENYLHYDANTOIN SODIUM CAPSULES, USP

100 mg. (1 ½ gr.) (Dilantin Sodium Capsules)

Category

Anticonvulsant.

Action

Diphenylhydantoin exerts antiepilectic activity without causing

general depression of the nervous system. It is not a general anticonvulsant, but is essentially specific for grand mal and psychomotor epilepsy.

Uses

Diphenylhydantoin sodium is used in the symptomatic therapy of epilepsy. It is the drug of choice in preventing major convulsive seizures (grand mal) and in controlling psychomotor equivalent seizures. It is sometimes helpful, especially when used with other anticonvulsants such as phenobarbital, in petit mal epilepsy, chorea, Parkinson's syndrome, and other nonepileptic convulsive states.

Cautions

Toxic effects upon oral administration of this drug are infrequent, but the appearance of exaggerated side effects as described below indicate the need for reduction of dosage. The drug should be discontinued if toxic effects continue.

Side Effects

Most patients experience some side effects upon administration of this drug, usually between the third and tenth days of use. Temporary reduction of dosage may be employed if required to control these effects. Usual manifestations include nervous effects (ataxia, vertigo, blurred vision, nystagmus, tremors, dysphagia, insomnia, somnolence, irritable temper, mental confusion, hallucinations) or gastric irritation (because of the alkaline reaction). Gingival hyperplasia and various types of dermatitis also sometimes occur upon continued use of diphenylhydantoin.

Dosage

Diphenylhydantoin sodium capsules should be taken with water after meals. The dosage should be the smallest that prevents epileptic seizures as determined by individual trial, starting with 100 mg. (1 capsule) twice a day and increasing by 100 mg. per day each week up to a maximum of 600 mg. (6 capsules) daily. The usual dose is 400 mg. (4 capsules) daily. Very small children may be started with 30 mg. twice a day, but because of the bitter taste, smaller size capsules or special preparation should be used. The consumption of a half glass of water with each dose is important in lessening gastric irritation.

Similar Preparations

Phenobarbital, USP
Primidone, USP
Trimethadione, USP

EDROPHONIUM CHLORIDE INJECTION, USP

10 mg. (1/6 gr.) per ml., 10 ml. bottle (Tensilon Solution)

Category

Curare antagonist.

Action

Edrophonium is a rapid acting skeletal muscle stimulant. It is a highly specific curare antagonist for parenteral use.

Uses

This product is used when an antagonist is needed to terminate the action of curare, tubocurarine, or certain other curare derivatives which have been employed in abdominal or pelvic surgery, endoscopy, shock therapy, or treatment of muscle spasm. Edrophonium chloride injection is also used in the diagnosis and evaluation of treatment requirements in myasthenia gravis and occasionally as an agent to treat myasthenic crises.

Cautions

This drug should be used with caution in patients with a history of cardiac disease or asthma. When used as a curare antagonist, overdoses may potentiate the paralytic effect of the curare. Exaggerated side effects may be controlled by the use of intravenous atropine, which may be considered as an antidote for many of the effects of edrophonium. Although edrophonium is a curare antagonist, it does not combat the circulatory collapse or respiratory depression of curarization, so that its use for this purpose should be supplemented by artificial respiration as required. The action of edrophonium is evanescent, and repetition of the dose in combating curare poisoning may be required. The use of edrophonium in patients with intestinal obstruction is contraindicated.

Side Effects

Intravenous injection of drug may produce a number of untoward effects, such as visual disturbance, lacrimation, perspiration, mild gastrointestinal stimulation, dizziness, slight hypotension, bradycardia, or heart irregularities; effects are usually transient.

Dosage

For the counteraction of a curare or tubocurarine overdosage, the usual dose is 10 mg. (1 ml.) injected intravenously. To terminate mild curarization, 5 mg. (½ ml.) is sufficient. Doses as high as 40 mg. (4 ml.) may be used if required.

In the diagnostic test for myasthenia gravis, the usual dose is 10 mg. (1 ml.), repeated at hourly intervals.

When used therapeutically during acute myasthenic crisis, it is usually administered by continuous intravenous drip as required.

Similar Preparations

Neostigmine Bromide, USP

Neostigmine Methylsulfate, USP

ENTERAL FEEDING FORMULA

(Nasogastric or Oral), with feeding tube

Category

Nutritional supplement.

Action

This product is a specially formulated dry skim milk powder fortified with vitamins and palatably flavored. It consists basically of 75% nonfat dry milk and 25% anhydrous dextrose with suitable amounts of 7 vitamins (thiamine, riboflavin, nicotinamide, pyridoxine, pantothenic acid, folic acid, and ascorbic acid) plus vanilla flavoring.

A 270-gram (9.5 oz.) portion of the powdered formula when reconstituted with water to 1 liter (1.06 quarts) makes a suspension furnishing approximately 1000 calories in food value.

Uses

This product is used as a nutritional food supplement. It may be administered either by mouth or by nasogastric tube, the latter method being used for unconscious patients.

Cautions

After reconstitution with water, the formula should be used within 6 hours unless it can be refrigerated.

Side Effects

None, except for possible allergic reactions to one of the ingredients.

Dosage

To prepare the suspension for use, thoroughly mix 270 Gm. of the powder with sufficient potable water to make 1 liter (9 oz. by weight or 1½ cups by volume of powder with sufficient water to make 1 quart). Stir, beat, or shake the mixture until a uniform suspension is obtained. The use of lukewarm water will facilitate the mixing process.

For nasogastric use the suspension should be strained through three layers of clean gauze into an empty 1-liter intravenous-solution-type bottle to which the nasogastric set can be attached.

Administer the suspension as required in accordance with the caloric needs of the patient.

Similar Preparations

Delcos
Liprotein
Lonalac
Meritene
Protenum
Protinal
Somagen
Sustagen

EPHEDRINE SULFATE CAPSULES, USP

25 mg. (⅜ gr.)

Category

Sympathomimetic.

Action

Ephedrine has pharmacologic actions similar to epinephrine, but they are less dramatic and more prolonged. The drug produces responses that resemble those obtained by stimulation of adrenergic nerves. It raises the blood pressure, stimulates the heart muscle, constricts the arterioles, relaxes the smooth muscle of the bronchi and gastrointestinal tract, increases the metabolic rate, and stimulates the central nervous system. It also has an antiallergic action.

Uses

The actions of ephedrine on the cardiovascular system, respiratory system, central nervous system, and smooth muscle make it useful in the treatment of many conditions, including narcolepsy, poisoning by central nervous system depressants, postural hypotension, complete heart block, bronchial asthma, hay fever, acute coryza, acute rhinitis, acute sinusitis, myasthenia gravis, angioneurotic edema, drug reactions, and chronic urticaria.

Cautions

Ephedrine is a relatively safe drug, but caution should be exercised in administering it to patients with organic heart disease or cardiac decompensation, hyperthyroidism, hypertension, and angina pectoris, and to patients receiving digitalis. Occasionally hypersensitivity to the drug may occur.

Side Effects

Most patients receiving sufficiently large doses of ephedrine experience one or more of the following side effects: anxiety complex, nervousness, insomnia, tremulousness, vertigo, headache, tachycardia, palpitation, sweating, and a sensation of warmth. These symptoms vary considerably in different individuals. Occasionally, nausea, vomiting, anorexia, difficulty in urination, precordial pain, and cardiac arrhythmias may be experienced.

Dosage

The usual oral dose of ephedrine sulfate is 25 mg. (1 capsule) every 4 hours. This dose may be doubled if necessary to produce the desired effects unless interdicted by the proportionate increase in undesirable side effects.

If the drug is administered for peripheral effects only, undesirable side effects due to its central actions may be controlled by the simultaneous administration of phenobarbital (15 mg. of phenobarbital for each 25 mg. of ephedrine sulfate is usually sufficient).

Similar Preparations

Amphetamine Sulfate, USP
Ephedrine Hydrochloride, NF
Epinephrine, USP
Phenylephrine Hydrochloride, USP

EPHEDRINE SULFATE INJECTION, USP

25 mg. (⅜ gr.) per ml., 1 ml. ampul

Category

Sympathomimetic.

Action

See *Ephedrine Sulfate Capsules* for action of ephedrine.

Uses

Ephedrine injection is used for the same applications as *Ephedrine Sulfate Capsules*, but particularly in the treatment of asthma or hay fever. Ordinarily, however, oral administration by capsule is preferred unless prohibited by the condition of the patient. In addition, the injection is employed during spinal anesthesia to maintain blood pressure at a suitable level, improve respiration, and limit peripheral bleeding.

Cautions

See *Ephedrine Sulfate Capsules.* When intended for use in maintaining blood pressure during spinal anesthesia, hypotensive patients should be given a preliminary test with ephedrine injection to determine responsiveness.

Side Effects

See *Ephedrine Sulfate Capsules.*

Dosage

The usual dose is 25 mg. (1 ml.) injected subcutaneously or intramuscularly, repeated every 4 hours. The individual doses may be as high as 50 mg. (2 ml.) if necessary.

For use in raising blood pressure during spinal anesthesia, inject 35 to 50 mg. (1.5 to 2 ml.) subcutaneously or intramuscularly. Injection may be repeated during operation if blood pressure again falls. If it is necessary to quickly combat a continued fall in pressure, 25 mg. (1 ml.) may be cautiously injected intravenously.

Similar Preparations

Epinephrine Injection, USP
Levarterenol Bitartrate Injection, USP
Metaraminol Bitartrate Injection, NF
Methoxamine Hydrochloride Injection, USP
Phenylephrine Hydrochloride Injection, USP

EPINEPHRINE INJECTION, USP

1:1,000, 1 ml. ampul

Category

Sympathomimetic.

Action

Epinephrine is the sympathomimetic adrenal hormone. Responses to it resemble those produced by stimulation of adrenergic nerves. Epinephrine stimulates the heart, increases the heart rate, raises the blood pressure, and relaxes the musculature of the bronchi and intestine. It constricts the arterioles and capillaries of the skin and mucosa, but in proper concentrations it dilates the blood vessels of the visceral and skeletal muscles. Epinephrine is effective topically or parenterally, but is ineffective orally.

Uses

Epinephrine injection is used to treat syncope due to complete heart block or carotid sinus sensitivity; to relieve bronchial asthmatic paroxysms or status asthmaticus; with local anesthetics, to limit the area of action and prolong the effect of the anesthetic; and to provide symptomatic relief in a variety of allergic disorders, including giant urticaria, serum reactions, serum sickness and angioneurotic edema. Applied topically, epinephrine solution is frequently used as a hemostatic agent to control superficial hemorrhages, as for example, in operative procedures on the nose and throat.

Cautions

Epinephrine injections should not be used if it is brown in color or contains a precipitate.

This drug should be administered with caution to elderly patients, or those with hypertension, heart disease, diabetes or thyroid disease. It should be given to infants or children only with close medical supervision and observation. Hypersusceptibility may occur in certain individuals, producing exaggerated side effects and even death with therapeutic doses. Overdoses (10 ml. or more) are frequently fatal.

Epinephrine injection is of little value, and injudicious use may be harmful, in cases of shock and circulatory collapse, and in most cases of acute heart failure or cardiac arrest. It should not be used on patients with angina pectoris.

Large therapeutic doses should not be repeated until all effects of the previous dose have passed. Intravenous use is especially dangerous if the heart is already weakened or overexcitable, as in cardiac disease or as a result of the concurrent use of chloroform, cyclopropane, or other agents having a cardiac effect.

Side Effects

Epinephrine injection may produce certain untoward side effects, particularly in patients with nervous temperament or thyroid disorders. These include: pallor; tremors; anxiety and nervousness; tachycardia and palpitation; precordial distress; increased respiration rate, blood pressure and temperature; wakefulness; and sometimes hyperglycemia.

Dosage

Epinephrine injection, 1:1000, may be injected subcutaneously, intramuscularly, or intravenously, or applied topically. However, intravenous use is generally to be avoided because of the greater danger.

The usual dose is 0.5 mg. (0.5 ml.) given subcutaneously. However, as little as 0.2 mg. (0.2 ml.) or as much as 1.0 mg. (1.0 ml.) may be given subcutaneously or intramuscularly to produce the desired effects. The initial dose, however, should not exceed 0.5 mg. (0.5 ml.) in the event the patient is hypersensitive to the drug. In intravenous use, the dose should not exceed 0.25 mg. (0.25 ml.). Doses may be repeated as required at 15-minute intervals or longer (up to 4 hours or more).

For use with local anesthetics, a final dilution of the epinephrine to 1:50,000 is usual.

For topical application for hemostasis, a 1:15,000 to a full strength 1:1000 solution may be used as required.

For resuscitation in acute circulatory failure from myocardial decompensation, as in anesthesia accidents, 0.25 to 0.5 mg. (0.25 to 0.5 ml.) may be used subcutaneously or injected intracardially.

Similar Preparations

Ephedrine Sulfate Injection, USP
Levarterenol Bitartrate Injection, USP
Metaraminol Bitartrate Injection, NF
Methoxamine Hydrochloride Injection, USP
Phenylephrine Hydrochloride Injection, USP

ERGONOVINE MALEATE TABLETS, USP

0.2 mg. (1/300 gr.)

Category

Oxytocic.

Action

Ergonovine is an ergot alkaloid. It is a powerful uterine stimulant, causing vigorous contractions of the gravid and puerperal uterus.

Uses

The chief use of ergonovine is to control postpartum hemorrhage caused by uterine atony. It is also used to promote involution of the uterus after childbirth. Occasionally it is employed in the third stage of labor to hasten delivery of the placenta. It can be used in the treatment of migraine headache, but it is considered to be inferior to ergotamine tartrate for this purpose.

Cautions

Prolonged use of this product is to be avoided, as with all ergot preparations. Ergonovine should *not* be used for the induction of labor, nor routinely in any stage of labor.

Side Effects

Untoward effects with this drug are minimal. Large doses may produce painful uterine contractions in some postpartum cases.

Dosage

The usual oral dose is 0.2 mg. (1 tablet) 3 times daily postpartum, continued for 4 days. Individual doses of 0.4 mg. (2 tablets) may be given if required.

Similar Preparations

Ergotamine Tartrate, USP
Methylergonovine Maleate, NF
Oxytocin Injection, USP
Posterior Pituitary Injection, USP

ETHER, USP

Category

General anesthetic.

Action

Upon inhalation, ether produces a progressive paralysis of the central nervous system; depression of the cortex, the basal ganglia and cerebellum, the spinal cord, and the medulla occur in order. Depending upon the concentration of ether vapor in the inspired air, any of the various stages of anesthesia may be reached and maintained.

Uses

Ether is the most widely used general anesthetic, as it provides the most favorable combination of effectiveness, safety, and minimum of untoward effects during and after administration. Ether may be administered by either the closed method, employing an anesthesia machine, or by the open method, using a gauze-covered anesthesia inhaler on which the ether is dispensed dropwise. Other less common methods may also be used.

Cautions

WARNING: Ether is highly volatile and flammable. Its vapor when mixed with air and ignited may explode. Ether vapor is two and one-half times as heavy as air, so that dangerous concentrations may occur at points remote from the actual area of use. Do not use ether in the proximity of an open flame or near any device that may produce electrical sparks. Special precautions must be taken to prevent sparks from static electricity occurring in operating rooms or other areas where ether is used.

Ether should be administered only by a qualified anesthetist. Excessive or improper administration may cause death. In the event of cardiac or respiratory failure during anesthesia, prompt corrective measures must be resorted to. The use of ether is contraindicated in chronic pulmonary disease, in patients with advanced renal disease, acidosis, diabetes, or an ailment in which an increase in intracranial pressure would be harmful.

Ether used for anesthesia must be of USP quality specially packaged for the purpose. It must be used within 24 hours after opening the can, as on exposure to air, moisture, and light, it develops various irritating impurities. (Any surplus ether may be used as a surface antiseptic or as a solvent.)

Side Effects

The usual side effects common to all anesthetic agents may be observed with ether. Hyperglycemia, glycosuria, albuminuria, drop in body temperature, acidosis, gastric irritation, nausea, vomiting, and bronchial irritation, increased blood pressure, and rapid pulse may occur during or after the use of ether.

Dosage

In the closed method, a proper concentration of ether is maintained in the system by the anesthetist. About 150 ml. of ether is required for one hour's anesthesia by this method.

In open or drop method of administering ether anesthesia, ether is dropped rapidly (about 150 drops per minute) over entire surface of anesthesia inhaler (consisting of a metal frame covered with about eight layers of gauze). The rate is reduced as required after the induction of anesthesia. Approximately 250 ml. of ether is needed for one hour's anesthesia by this method.

Similar Preparations

Chloroform, USP
Cyclopropane, USP
Ethylene, USP
Halothane (Fluothane)
Nitrous Oxide, USP
Trichloroethylene, USP
Vinyl Ether, USP

EUGENOL, USP

Category

Dental obtundant.

Action

Eugenol has topical anesthetic, analgesic, and disinfectant properties. It is the chief constituent of clove oil. With zinc oxide it forms a hard cement useful in dentistry.

Uses

Eugenol is used in dentistry to soothe and dull the pain of toothache. It is also employed for its disinfectant action prior to filling root canals.

Zinc oxide and eugenol cement is a dental-protective cement useful in making pulp cappings or temporary fillings and as a temporary adhesive for affixing detached crowns.

Cautions

Eugenol is not ordinarily used internally. It should be applied carefully to the required area, as it is irritating to mucous membranes.

Side Effects

None.

Dosage

Apply locally in small amounts to the exposed dentine in the cavity of the affected tooth. Repeat as necessary

To prepare zinc oxide and eugenol cement, thoroughly mix sufficient quantities of zinc oxide powder and eugenol to make a thick, putty-like paste. Apply this mixture to teeth as required. Mix only a sufficient quantity of the cement to cover immediate needs. The mixed cement may be stored for short periods if protected from air and moisture.

Similar Preparations

Clove Oil, USP
Toothache Drops, NF
Zinc Compounds and Eugenol Cement, NF
Zinc Oxide, Silver, and Clove Oil Paste
Zinc Oxide and Thymol Cement

HYDROCORTISONE SODIUM SUCCINATE, STERILE

133.7 mg. in bottle, with diluent (100 mg. hydrocortisone equivalent) (Solu-Cortef)

Category

Adrenocortical steroid (glucogenic type).

Action

This drug is a water soluble form of hydrocortisone suitable for injection or application to mucous membranes. The action is identical to that of hydrocortisone except that, being water soluble, it provides intense rapid action. Injected intravenously it provides a rapid hormonal effect to stabilize blood pressure and plasma volume in shock-like states. (See *Hydrocortisone Tablets* for the action of hydrocortisone.)

Uses

Hydrocortisone sodium succinate is used parenterally in treating shock-like syndromes resulting from acute adrenal cortical insufficiency, acute hypersensitivity (allergenic reactions), status asthmaticus, disseminated lupus erythematosus, and overwhelming infections. It is intended only for short-term emergency therapy (as, for example, during surgery) or for local application to mucous membranes.

Cautions

This drug is not intended for long-term corticosteroid therapy. Its use is contraindicated in patients with allergic sensitivity to corticosteroids. Except when used for short-term or emergency therapy, hydrocortisone sodium succinate is also contraindicated in patients with arrested tuberculosis, *Herpes simplex*, keratitis, acute psychoses, Cushing's syndrome, peptic ulcer, vaccinia, and varicella.

Side Effects

Since this drug is basically for short-term emergency use only, the usual side effects of long-term corticosteroid therapy are not likely to be encountered. See *Hydrocortisone Tablets* for side effects related to long-term therapy.

Dosage

The usual initial dose is 100 mg. of the base (the entire contents of one vial dissolved in the diluent furnished, to make about 2 ml. of injection). The injection is administered either intramuscularly or intravenously. If given intravenously (the usual route in emergencies), it should be injected slowly, over a period of 30 seconds to one minute. The drug may also be given by slow intravenous infusion as a solution in 5% dextrose. Subsequent doses of 50 mg. may be given as required.

Similar Preparations

Cortef Sterile Solution I.V.
Hydrocortisone Phosphate Injection (Cortiphate; Hydrocortone)

HYDROCORTISONE TABLETS, USP

20 mg. (1/3 gr.), Scored

Category

Adrenocortical steroid (glucogenic type).

Action

Hydrocortisone is an adrenocortical hormone necessary to normal metabolic function. In some cases its action in therapy is to augment the body supply of hormone in cases of adrenal insufficiency. However, in most of the clinical conditions relieved by hydrocortisone or related compounds there is no clear evidence of adrenal deficiency. The effects are palliative, not curative.

Uses

Hydrocortisone has proved to be of value as an anti-inflammatory agent in a wide variety of apparently unrelated ailments: rheumatoid arthritis, systemic *lupus erythematosus,* asthma, hay fever, drug sensitivity, dermatitis (atopic, contact, and neuro-), acquired hemolytic anemia, idiopathic thrombocytopenic purpura, nephrotic syndrome, ulcerative colitis, adrenogenital syndrome, bursitis, and Addison's disease (with desoxycorticosterone).

Cautions

The use of hydrocortisone (as well as other corticosteroids) is contraindicated in patients with arrested tuberculosis, acute psychoses, Cushing's syndrome, peptic ulcer, *Herpes simplex,* keratitis, vaccinia, and varicella. It should be used with caution in pregnancy and in the presence of active tuberculosis, diabetes mellitus, osteoporosis, chronic psychotic reactions, predisposition to thrombophlebitis, hypertension, congestive heart failure, and renal insufficiency. Hydrocortisone therapy may mask signs of infection and enhance dissemination of the causative organism, so that vigorous specific therapy for any infectious conditions should be carried out concurrently with the use of hydrocortisone. Signs of any other deleterious effects of long-term therapy, such as aseptic bone necrosis, should be carefully watched for during the treatment period.

Upon discontinuance of the use of this drug, withdrawal should be gradual. Abrupt withdrawal may cause the patient to go into shock because of adrenocortical suppression during therapy.

Side Effects

Many untoward side effects have been observed in long-term therapy with this drug (or other corticosteroids). These include sodium retention with edema, hypertension, hyperpotassemia, hypochloremic alkalosis, negative nitrogen balance, osteoporosis and resulting fractures, hyperglycemia, glycosuria, hirsutism, acne, euphoria, mental disturbances, amenorrhea, thrombosis, rounded facies, and suppression of adrenocortical function.

Dosage

The usual oral dose is 20 mg. (1 tablet) two to four times a day until the desired effect is obtained (not more than 2 weeks). The daily dose is then reduced by 10 mg. steps to the smallest maintenance dose. Depending upon the severity of the symptoms and the tolerance and response of the patient, larger initial doses (up to 300 mg. per day) may be given, particularly for acute disorders of short duration. During therapy the patient should be checked frequently for any adverse effects of the drug as described under *Cautions* and *Side Effects* above.

Similar Preparations

Cortisone Acetate, USP (Cortone Acetate)
Desoxycorticosterone Acetate, USP
Prednisolone, USP
Prednisolone Acetate, USP (Delta-Cortef Acetate)
Prednisone, USP

HYDROXYZINE HYDROCHLORIDE INJECTION

25 mg. (⅜ gr.) per ml., 10 ml. bottle (Atarax Parenteral Solution)
(Vistaril Parenteral Solution)

Category

Psychotherapeutic agent.

Action

Hydroxyzine has a mild tranquilizing action plus antiemetic and antihistaminic effects. It also has a synergistic sedative action with narcotics, permitting a reduction in the required dosages of the latter.

Uses

Hydroxyzine hydrochloride injection is used in the symptomatic treatment of acutely disturbed or hysterical patients, in alcoholism with anxiety, delirium tremens, and other situations where oral tranquilizers cannot be used. An important use is in surgery, where parenteral administration of hydroxyzine allows as much as 50% reduction in the required preoperative narcotic dosage. It is also efficacious in controlling postoperative nausea and emesis. Acute urticaria and other manifestations of allergic dermatoses are frequently controlled by this drug.

Cautions

When injected intravenously, this drug should be given slowly, 25 mg. (1 ml.) per minute, with a maximum of 100 mg. (4 ml.) in a single administration.

The toxicity of hydroxyzine is low, but as it enhances the depressive effect of opiates and barbiturates, the dose of the latter should be reduced in concomitant administration of hydroxyzine

Side Effects

Drowsiness and dryness of mouth may occur in some patients.

Dosage

For adult psychiatric emergencies, including acute alcoholism, the usual dose if given intramuscularly is 50 to 100 mg. (2 to 4 ml.) given immediately, then similar amounts every 4 to 6 hours as needed. For the same use if given intravenously, the initial dose is 50 mg. (2 ml.), then 25 to 50 mg. (1 to 2 ml.) every 4 to 6 hours as required.

For preoperative and postoperative adjunctive medication, inject 25 to 100 mg. (1 to 4 ml.) intravenously or intramuscularly for adults. For children use 0.5 mg. per pound of body weight intramuscularly. (Note: When 50 mg. of hydroxyzine hydrochloride is used preoperatively or prepartum, concurrent meperidine dosage should be reduced from 100 to 50 mg.)

Similar Preparations

Azacyclonol Hydrochloride (Frenquel)
Benactyzine Hydrochloride (Suavitil)
Buclizine Hydrochloride (Softran)
Chlorpromazine Hydrochloride, USP (Thorazine)
Meprobamate, USP (Equanil; Miltown)

INSULIN INJECTION, USP

80 units per ml. 10 ml. bottle

Category

Prompt-acting insulin preparation.

Action

Insulin is a carbohydrate metabolism-regulating protein. It promotes the oxidation of glucose, lowers the blood sugar level, and regulates the formation of sugar from noncarbohydrate sources. Administered to a diabetic patient, insulin temporarily restores the ability to utilize carbohydrates, lowering the blood sugar level, increasing liver glycogen, restoring the capacity to fully metabolize fats, and effecting the disappearance of ketone bodies from the urine.

The effect of a dose of plain insulin usually begins one hour after injection and extends over 6 to 8 hours, with peak action occurring at 2 to 3 hours.

Uses

Insulin injection is used as a prompt-acting preparation in the treatment of diabetes mellitus cases which cannot be controlled satisfactorily by dietary regulation alone. Other minor uses include the treatment of selected cases of non-diabetic malnutrition and hypoglycemia shock therapy of certain cases of schizophrenia.

Insulin is frequently added to dextrose solutions when the latter are used for a prolonged course of parenteral nutrition.

Cautions

Doses must be timed and regulated carefully to suit individual needs, with frequent check of blood sugar and urine sugar until a regimen is established. Overdosage causes "insulin shock", characterized by weakness, nervousness, profuse sweating, pallor or flushing, mental disturbances, and, in marked hypoglycemia, loss of consciousness. These symptoms may be relieved by the administration of carbohydrates orally, by stomach tube, or intravenously. The usual carbohydrate used is dextrose, giving 5 to 20 Gm. (depending upon the patient's history and severity of symptoms) in a 5% to 50% aqueous solution.

Insulin should be stored in a refrigerator, but should not be allowed to freeze. The expiration dating on the unit package should be observed.

Side Effects

None, if administered in proper dosage to suit the individual. However, allergic hypersensitivity is obesrved in rare instances.

Dosage

The usual dose of insulin varies from 5 to 100 units, depending upon the needs of the diabetic patient. The dose is injected subcutaneously into the loose subdermal tissue either as a single dose before breakfast or, particularly in the more severe cases where larger doses are required, as divided doses in 2, 3 or more portions. If 2 doses are given, the portions are administered approximately 30 minutes before the morning and evening meals. For 3 doses, the portions are given 30 minutes before the morning and evening meals and at bedtime.

For diabetic coma, 50 to 100 units of regular insulin injection should be administered immediately, half intravenously and half subcutaneously, followed by 20 units subcutaneously at intervals of ½ to 3 hours, as needed. During treatment, urine sugar and acetone should be checked hourly to guard against hypoglycemia. If it becomes sugar free, dextrose should be administered. Normal saline (usually with added potassium) may be used intravenously to offset dehydration.

In the preesnce of complications of a medical or surgical nature, and in diabetic acidosis, the rate of administration of insulin should be based on the results of a quantitative test for urine sugar and ketones performed every 4 to 6 hours. According to the degree of glycosuria, the suggested dosage is as follows: 4 plus, 20 units; 3 plus, 15 units; 2 plus, 10 units; 1 plus, 5 units; adding 5 units in each case for a distinctly positive test for acetone. In the presence of strongly positive acetone tests, testing should

be performed every 2 to 3 hours and the insulin dosage modified as required.

Similar Preparations

Chlorpropamide (Diabinese)
Phenformin Hydrochloride (DBI)
Semi-Lente Iletin
Tolbutamide, USP (Orinase)
Zinc Insulin Crystals

INSULIN, ISOPHANE, SUSPENSION, USP

80 units per ml., 10 ml. bottle (NPH Iletin Suspension)

Category

Intermediate-acting insulin preparation.

Action

See *Insulin Injection* for general action. Isophane insulin differs from plain insulin in the timing of the action. The effect of a dose of isophane insulin usually begins 1 to 2 hours after injection and extends over 20 to 32 hours, with peak action occurring at 10 to 12 hours.

Uses

Isophane insulin is used for the clinical control of diabetes mellitus when an intermediate effect is desired. It is designed to conform as closely as possible to the needs of the average diabetic patient.

Cautions

The same precautions as described under *Insulin Injection* apply to this drug, plus those that follow.

Isophane insulin is not recommended for use in place of regular insulin injection in emergencies such as diabetic acidosis when immediate action is desired. This drug should not be injected intravenously.

Before use, isophane insulin injection should be brought into uniform suspension by careful rotation and inversion of the vial. Vigorous shaking with consequent frothing should be avoided.

Side Effects

See *Insulin Injection.*

Dosage

The usual daily dose of isophane insulin varies from 10 to 80 units, depending upon the needs of the patient. The dose is injected subcutaneously into the loose subdermal tissue, usually as a single daily dose before breakfast.

Patients previously receiving regular insulin are usually started with about two-thirds of their usual daily dose, with subsequent adjustment of dosage being made as necessary.

Previously untreated diabetic patients may be started with a daily dose of 10 units, which is then increased daily by 3 to 5 units until control is established.

Similar Preparations

Chlorpropamide (Diabinese)
Globin Zinc Insulin, USP
Insulin Zinc Suspension, USP (Lente Iletin)
Phenformin Hydrochloride (DBI)
Tolbutamide, USP (Orinase)

INSULIN, PROTAMINE ZINC, SUSPENSION, USP

40 units per ml., 10 ml. bottle (PZI)

Category

Prolonged-acting insulin preparation.

Action

See *Insulin Injection* for general action. Protamine zinc insulin differs from plain insulin in the timing of the action. The effect of a dose of protamine zinc insulin usually begins 4 to 6 hours after injection and extends over 24 to 36 hours or longer, with peak action occurring at 16 to 24 hours.

Uses

Protamine zinc insulin is used for the clinical control of diabetes mellitus when a prolonged effect is desired. It is used particularly in severe cases to control high nighttime blood sugar levels.

Cautions

The same precautions as described under *Isophane Insulin Suspension* apply to this drug. It is not to be used for emergencies, should not be administered intravenously, and should be carefully mixed to form a uniform suspension before injection.

Side Effects

See *Insulin Injection.* Allergic reaction from the protamine content of this product may occur in a few sensitive individuals.

Dosage

The usual daily dose of protamine zinc insulin varies from 10 to 80 units depending upon the needs of the patient. For method of use and determination of dosage see *Isophane Insulin Injection.* During the use of this drug, small supplemental doses of regular insulin may be required to control morning hyperglycemia.

Similar Preparations

Chlorpropamide (Diabinese)
Phenformin Hydrochloride (DBI)
Tolbutamide, USP (Orinase)
Ultra-Lente Iletin

ISOPROPYL ALCOHOL, NF

Category

Antiseptic and rubefacient.

Action

This product has properties similar to those of ethyl alcohol, except that it is suitable for external use only. In undiluted form or in concentrations above 70%, it is antiseptic, but cannot be relied upon to destroy sporebearing organisms such as *Clostridium tetani, Clostridium welchii,* or *Bacillus anthracis.* When diluted with water to 70% concentration and applied to skin, it has moderate germicidal, feeble anesthetic, and mild counter-irritant actions.

Uses

Isopropyl alcohol is used as a disinfectant for skin surfaces, as, for example, prior to administering an injection. It can be employed as an emergency measure in the disinfection of surgical instruments. When diluted with water to appropriate strengths, it is also useful as a rubefacient, cleansing agent, skin hardening agent, and cooling, soothing application.

Cautions

WARNING: This product is for external use only. If taken internally serious gastric disturbances will result. Keep away from eyes or other mucous membranes. Avoid prolonged breathing of vapor. Product is flammable; do not use near an open flame.

Isopropyl alcohol or any other organic solvent (or any product containing such solvent) should not be used in conjunction with or following the use of hexachlorophene soap or other hexachlorophene products. (See *Cautions* under *Soap, Surgical.*)

Side Effects

None when used externally.

Dosage

For use in the disinfection of skin surfaces, use full strength without dilution. The undiluted product should also be used if required for instrument sterilization in an emergency. (NOTE: Instruments must be *thoroughly* cleaned before sterilization.)

For use as a rubefacient or skin hardening agent, dilute two parts of isopropyl alcohol with one or two parts of water, as preferred, to make a 50%-70% solution.

For use as a cleansing agent or soothing application, dilute one part of product with three parts of water to make a 25% solution.

Apply the solution sparingly with gentle rubbing action. Do *not* use internally or on mucous membranes.

Similar Preparations

Alcohol, USP (Ethyl Alcohol)
Alcohol, Denatured, Formula No. 23H
Alcohol Rubbing Compound, NF

LEVARTERENOL BITARTRATE INJECTION, USP

0.2%, 4 ml. ampul (Levophed Bitartrate Injection)

Category

Sympathomimetic.

Action

Levarterenol is the major pressor amine found in post-ganglionic adrenergic nerves. Its pharmacologic action is qualitatively similar to epinephrine, but important quantitative differences exist. Levarterenol raises blood pressure by peripheral vasoconstriction, but maintains or even increases effective blood flow through the heart, lungs, kidneys, and other organs. It has a very short duration of action.

Uses

The only important use of levarterenol is for the maintenance of blood pressure in an acute hypotensive or shock state such as may occur in hemorrhage, surgical and nonsurgical trauma, myocardial infarction, central vasomotor depression, spinal anesthesia, neurosurgery, sympathectomy, septicemia, pheochromocytomectomy, and serious reactions to medication. A diluted solution, 0.02%, can be used for resuscitation in cardiac arrest which may occur during anesthesia or following drowning or a lethal dose of drugs.

Cautions

Levarterenol bitartrate injection, 0.2% *must be diluted* before use. Overdosages may result in dangerously high blood pressure levels and lead to death. During administration of this drug, blood pressure should be checked every 15 minutes during the infusion and more often during initial adjustment of the rate of administration (every 2 to 5 minutes). Because of its potency and because of individual variations to pressor substances, the patient should not be left unattended during the administrtaion of this drug. The rate of flow of the infusion as well as the blood pressure and other effects on the patient must be watched constantly. Extravasation should be avoided, as local necrosis and sloughing will occur unless promptly combated with an adrenergic blocking agent, such as phentolamine or piperoxan hydrochloride.

Levarterenol can produce cardiac arrhythmias such as vertricular fibrillation. This contraindicates its use during cyclopropane anesthesia.

Side Effects

Untoward effects are usually minimal, but may include anxiety, respiratory difficulty, "pounding" of the heart, and transient headache. Unusual severity of side effects may indicate an overdosage. Sensitive patients may experience severe hypertension, violent headache, photophobia, stabbing retrosternal pain, pallor, intense sweating, or vomiting.

Dosage

Because of its transient action, levarterenol is ordinarily administered by continuous infusion, except when employed as a resuscitating agent in cardiac arrest. The usual infusing medium is 5% dextrose injection. (5% dextrose in saline can also be used; saline alone is not recommended.) Four ml. (1 ampul) of levarterenol bitartrate injection is added to 1000 ml. of the 5% dextrose injection and the resulting solution is administered intravenously at a rate which will maintain the blood pressure at the normal level. The required rate of infusion varies from 0.25 to 1.25 ml. (2 to 10 micrograms of levarterenol bitartrate) per minute, but more may be administered as required. Even large doses appear to be safe so long as the patient remains hypotensive.

For use in resuscitation after cardiac arrest, a 0.02% solution should be prepared by diluting 1 part of the 0.2% injection with 9 parts of normal saline for injection. This dilution is injected intravenously (brachial or jugular vein) or intracardially (left atrium, ascending aorta, or vena cava), using 0.5 to 0.75 ml. of the 0.2% solution. The dose may be repeated in 1 to 4 minutes as required if the blood pressure starts to fall again.

Similar Preparations

Ephedrine Sulfate Injection, USP
Epinephrine Injection, USP
Metaraminol Bitartrate Injection, NF (Aramine)
Methoxamine Hydrochloride Injection, USP (Vasoxyl)

LIDOCAINE HYDROCHLORIDE AND EPINEPHRINE INJECTION

Contains Procaine Hydrochloride 2% and Epinephrine 1:100,000, Cartridges, 1.8 ml. (Xylocaine Dental Cartridges)

Category

Local anesthetic.

Action

This product is a special formulation of lidocaine for local anesthetic use in dentistry. It is packaged in dental cartridges to fit the dental cartridge syringe. See *Lidocaine Hydrochloride Injection, USP, 1%*, for physiologic actions. The epinephrine is included in this injection as a vasoconstrictor to control the area of anesthesia and to prolong the duration of the anesthesia.

Uses

Lidocaine hydrochloride with epinephrine injection is used as a local anesthetic in dental and oral surgery.

Cautions

See *Lidocaine Hydrochloride Injection, 1%*.

Side Effects

See *Lidocaine Hydrochloride Injection, 1%.*

Dosage

Inject as required to produce the desired depth and area of anesthesia. Also see *Lidocaine Hydrochloride Injection, 1%.*

Similar Preparations

Metabutoxycaine Hydrochloride Injection, NF (Primacaine Injection)

Procaine Hydrochloride Injection, USP (Novocaine Hydrochloride Injection)

Propoxycaine and Procaine Hydrochlorides and Levonordephrin Injection, NF

Procaine, Tetracaine and Nordefrin Hydrochlorides Injection, NF

LIDOCAINE HYDROCHLORIDE INJECTION, USP, 1%

5 ml. ampul (Xylocaine Hydrochloride Injection)

Category

Local anesthetic.

Action

Lidocaine is a rapid-acting potent local anesthetic with a potency about twice that of an equal concentration of procaine. It blocks nerve conduction when applied locally to nerve tissue in proper concentration.

Uses

Lidocaine hydrochloride injection is employed for infiltration anesthesia (usually in a concentration of 0.5%), for nerve block (1% to 2% solutions), and for topical anesthesia of mucous membranes (2% solution). It also has been employed in spinal, caudal, peridural, and epidural anesthesia.

Cautions

Severe reactions may occur with sensitive individuals so that injections should be made slowly. Frequent aspirations should be made during injection of lidocaine or other local anesthetics to insure that intravascular injection is not occurring. Toxic reactions may lead to respiratory arrest, cardiovascular collapse, and cardiac arrest. Except in cases where vasopressor drugs are contraindicated, epinephrine in concentrations not to exceed 1:100,000 should be used in conjunction with lidocaine to prolong and localize the anesthesia and reduce systemic absorption. Use of the minimum amount of the drug producing the required degree of local anesthesia is recommended to limit systemic absorption.

Topical administration is contraindicated in the presence of traumatized mucosa or sepsis in the region of proposed application.

Side Effects

Untoward effects may occur with sensitive individuals but are not usually encountered. These include nervousness, dizziness, blurred vision, nausea, tremors, convulsions, hypotension, cardiovascular depression, and respiratory arrest. In the event of the occurrence of side effects, discontinuance of the anesthesia is recommended.

Dosage

In general, lidocaine is used in amounts equal to one-half of the amount of procaine employed for a similar purpose. The minimum amount producing the desired effect should be used, but in no case should the dosage exceed 500 mg. of lidocaine hydrochloride (50 ml. of 1% solution). Wherever possible, epinephrine hydrochloride should be added to the lidocaine injection in concentration of 1:100,000.

For infiltration anesthesia, the 1% injection may be diluted to 0.5% or less before injection. For nerve block, the full-strength 1% solution (or greater strengths up to 2%—see *Lidocaine Hydrochloride Injection, 2%*) should be used.

For topical application to mucosa, the 2% solution is ordinarily used.

Similar Preparations

Piperocaine Hydrochloride Injection, USP (Metycaine)
Procaine Hydrochloride Injection, USP (Novocaine)
Tetracaine Hydrochloride Injection, USP (Pontocaine)

LIDOCAINE HYDROCHLORIDE INJECTION, USP, 2%

20 ml. bottle (Xylocaine Hydrochloride Injection)

Category

Local anesthetic.

Action

See *Lidocaine Hydrochloride Injection, 1%*.

Uses

See *Lidocaine Hydrochloride Injection, 1%*.

Cautions

See *Lidocaine Hydrochloride Injection, 1%*.

Side Effects

See *Lidocaine Hydrochloride Injection, 1%*.

Dosage

See *Lidocaine Hydrochloride Injection, 1%*, for general discussion and uses for more dilute solutions. The 2% solution can be diluted with normal saline for injection for any of these uses.

The full-strength 2% solution can be injected locally for nerve block anesthesia if desired, or lower strengths down to 1% or less may be prepared for this use.

For mucosal anesthesia, the undiluted 2% solution is ordinarily used, application being made by means of cotton pledgets or applicators to the mucous membrane. Dosage should be limited to the smallest amount possible.

Simliar Preparations

See *Lidocaine Hydrochloride Injection, 1%.*

LIDOCAINE OINTMENT, 5%

(Xylocaine Ointment)

Category

Local anesthetic.

Action

See *Lidocaine Hydrochloride Injection* for general action. This product contains lidocaine base in a water-soluble carbowax ointment.

Uses

Lidocaine ointment is used to control pain, itching, burning, and other unpleasant symptoms due to abrasions, hemorrhoids, inoperable anorectal conditions, nipple soreness, *Herpes zoster,* eczema, and similar conditions. It is also effective in controlling pre- and post-operative pain in hemorrhoidectomy. Application to broken skin or mucous membranes is effective in preventing and controlling pain during examination and instrumentation.

Cautions

Hypersensitivity may occur in rare instances upon topical application, particularly when applied to traumatized mucosa or broken skin.

Side Effects

None.

Dosage

The ointment is applied liberally to the affected area in amounts and frequency necessary to control the symptoms. The use of a sterile gauze pad as applicator is recommended when applying the ointment to burned or broken skin.

Similar Preparations

Cyclomethycaine Ointment (Surfacaine)
Dibucaine Ointment (Nupercaine)
Tetracaine Ointment (Pontocaine)

LUBRICANT, SURGICAL, Jelly

Category

Surgical lubricant.

Action

This product is a water-miscible jelly containing a bacteriostatic agent to maintain sterility. It is pharmacologically inactive, being used only to provide mechanical lubrication.

Uses

Surgical lubricant is employed in gynecology and surgery. It is useful in lubricating rectal thermometers, enema or douche nozzles, catheters, sounds, specula, colonic tubes, gloves, and diagnostic instruments for easy insertion. It can also be used as a lubricant for hemorrhoids and as an emollient coating for minor skin burns.

Cautions

None.

Side Effects

None.

Dosage

Surgical lubricant is applied liberally as required to instrument or appliance for insertion.

Similar Preparations

K-Y Sterile Lubricant
Lubraseptic Jelly

MERCAPTOMERIN SODIUM, STERILE, USP

Powder, for injection, 1.4 Gm. (21 gr.) in bottle, with 10 ml. of diluent (Thiomerin Sodium)

Category

Diuretic.

Action

Mercaptomerin sodium is a mercurial diuretic which produces an even and persistent fluid loss without drastic depletion effects.

Uses

This drug is used to provide diuresis when required in cardiac edema, acute and chronic congestive heart failure, nephrotic edema, ascites of liver disease, and in selected cases of subacute and chronic nephritis. Small doses may be used for maintenance therapy in cardiac failure showing recent coronary occlusion.

Cautions

The use of mercaptomerin sodium is contraindicated in patients with advanced chronic nephritis or acute renal disease, ulcerative

colitis, or signs of malignant hypertension or dehydration. Its use should be discontinued if symptoms of mercury sensitivity appear (stomatitis, colitis, cutaneous eruptions, flushing, fever, chills, nervousness, tremors, insomnia, headache). Patients receiving this drug should be observed carefully for signs of salt depletion, particularly in hot weather (muscle pains and cramps, abdominal colic, nausea and emesis, weakness, apathy, delerium, coma) and for signs of digitalis intoxication if digitalis therapy has been employed for some time. Care should be taken to avoid injecting this drug intracutaneously.

Side Effects

Untoward recations observed during administration of mercaptomerin sodium are usually due to mercury sensitivity or salt depletion as described under *Cautions* above. In addition, pain, ecchymosis, and fibrous nodules may occur at the injection site.

Dosage

The size of dose required to produce the required diuresis varies widely with individual patients. An average dose is about 130 mg. (1 ml. of the reconstituted solution) once or twice a week. However, doses as small as 26 mg. (0.2 ml.) or as large as 260 mg. (2 ml.) may be suitable for individual cases to maintain the dry (normal) weight of the patient. The customary method of injection is subcutaneously, as with insulin, avoiding edematous or adipose tissue and areas with poor circulation. The site should be massaged gently after injection and should be changed with each dose.

The intramuscular route may be more satisfactory with obese or emaciated patients, or with those whose skin is exceptionally susceptible to trauma. The gluteus maximus is the preferred site for intramuscular injection.

Intravenous administration may be necessary in severe edema and cardiac failure where impairment of blood flow and absorptive capacity may interfere with therapeutic response. Intravenous injection produces a more rapid but less prolonged response than other methods of use.

Similar Preparations

Chlorothiazide, USP (Diuril)
Dextrose Injection, USP, 50%
Meralluride, USP
Mercurophyllin, NF
Mersalyl

METARAMINOL BITARTRATE INJECTION, NF

Equivalent to 10 mg. (1/6 gr.) of Metaraminol base per ml., 1 ml. ampul (Aramine Bitartrate Injection)

Category

Sympathomimetic.

Action

Metaraminol is a potent vasopressor with prolonged action. It elevates both diastolic and systolic blood pressures. Drug is similar in action to ephedrine, but has less central stimulant effect.

Uses

Metaraminol is used to elevate and maintain blood pressure in such acute hypotensive conditions as occur during spinal anesthesia or in cases of shock. It can also be used in treatment of hypotension due to hemorrhage, cardiogenic shock, reactions to medications, surgical complications, and other causes.

Cautions

Metaraminol should be used with caution in patients with heart or thyroid disease, high blood pressure, or diabetes. Injections should be made only into areas with good circulation. Since the maximum effect of a metaraminol injection is not immediately apparent, 10 minutes should be allowed before any additional dosage. Use of this drug during cyclopropane anesthesia should be avoided if possible.

Side Effects

Untoward effects are rarely observed with proper dosage. However, with certain individuals cardiac arrhythmias, sustained high blood pressure, or headache may occur.

Dosage

By intramuscular or subcutaneous injection the usual dose is 2 to 10 mg. (0.2 to 1 ml.), starting with a small dose and adding increments at 10-minute intervals until the desired response is obtained. For continuous intravenous infusion, 15 to 100 mg. of metaraminol base (1.5 to 10 ml. of metaraminol bitartrate injection) is added to 500 ml. of isotonic sodium chloride injection or 500 ml. of 5% dextrose injection, and the final solution administered at a rate sufficient to maintain blood pressure at the desired level.

Direct intravenous administration should be resorted to only in grave emergencies. For this mode of administration, 0.5 to 5 mg. (0.05 to 0.5 ml.) is the usual dose range.

Similar Preparations

Epinephrine Injection, USP
Ephedrine Sulfate Injection, USP
Levarterenol Bitartrate Injection, USP (Levophed)
Methoxamine Hydrochloride Injection, USP (Vasoxyl)

METHIMAZOLE TABLETS, USP

5 mg. (1/12 gr.) (Tapazole Tablets)

Category

Thyroid inhibitor.

Action

Methimazole depresses the hormonal function of the thyroid gland. Its action is similar to propylthiouracil, but is potent in much smaller doses.

Uses

This drug is used to treat all types of hyperthyroidism. It is also administered preoperatively preparatory to surgery on patients with hyperthyroidism.

Cautions

Overdosages leading to hypothroidism should be avoided. Patients should be impressed with the necessity of reporting immediately any evidence of illness, particularly sore throat, skin eruptions, fever, headache, or general malaise, experienced during treatment with this drug. Great care must be exercised to avoid hypothyroidism if methimazole is administered during pregnancy. Postpartum mothers being administered this drug should not nurse their babies.

Side Effects

Approximately 6% of patients using methimazole experience some untoward reactions, such as skin rash, urticaria, fever, granulocytopenia, or agranulocytosis. Occasionally nausea, vomiting, epigastric distress, arthralgia, paresthesias, loss of taste, or toxic jaundice may be encountered.

Dosage

The dosage must be adjusted according to the needs of the patient to control the symptoms of hyperthyroidism. For mild hyperthyroidism, 5 mg. (1 tablet) taken orally every 8 hours is usually sufficient. Moderate cases usually require 10 mg. (2 tablets) three times a day; severe cases require 20 mg. (4 tablets) three times a day. Larger initial doses may be required for very pronounced hyperthyroidism.

After the disease is under control, 5 to 15 mg. (1 to 3 tablets) daily, divided into 2 or 3 doses, will usually serve as a maintenance regimen.

Similar Preparations

Iothiouracil Sodium (Itrumil)
Methylthiouracil, USP
Propylthiouracil

METHOXAMINE HYDROCHLORIDE INJECTION, USP

20 mg. (1/3 gr.) per ml., 1 ml. ampul (Vasoxyl Injection)

Category

Sympathomimetic (vasopressor).

Action

Methoxamine produces a prompt and prolonged vasopressor response and consequent reflex brachycardia. It raises blood pressure without cardiac stimulation and without producing most of the other effects characteristic of sympathomimetic drugs.

Uses

This drug is used during operative procedures to maintain blood pressure or restore it to normal levels. It can be employed during all types of anesthesia, including spinal and cyclopropane. Preoperatively it is employed on patients with low blood pressure, and postoperatively it is used to combat circulatory collapse.

Methoxamine is also useful in counteracting excessive hypotension caused by ganglion-blocking drugs during surgery, for relieving supraventricular tachycardia, and in the treatment of hypotension associated with myocardial infarction.

Cautions

Methoxamine should be used with care in patients with severe hypertension or hyperthyroidism and during the administration of ergot alkaloids. It is not for intrathecal administration.

Side Effects

High dosage may produce severe headache, urinary retention, vomiting, and sustained elevation of blood pressure.

Dosage

The usual intramuscular dose is 10 to 15 mg. (0.5 to 0.75 ml.), although as little as 5 mg. (0.25 ml.) or as much as 20 mg. (1 ml.) may be used as required to produce the desired response.

The usual intravenous dose for emergencies, such as acute hypotension associated with myocardial infarction or prolonged shock due to other causes, is 5 mg. (0.25 ml.) administered slowly. This may be followed by intravenous administration of a dilute solution (2 ml. of methoxamine hydrochloride injection in 250 ml. of 5% dextrose injection) by slow infusion.

In paroxysmal supraventricular tachycardia the average dose is 10 mg. (0.5 ml.) intravenously, injected slowly.

Similar Preparations

Ephedrine Sulfate Injection, USP
Epinephrine Injection, USP
Levarterenol Bitartrate Injection, USP (Levophed)
Metaraminol Bitartrate Injection, NF (Aramine)

NALORPHINE HYDROCHLORIDE INJECTION, USP

5 mg. (1/12 gr.) per ml., 2 ml. ampul
(Nalline Hydrochloride Injection)

Category

Narcotic antagonist.

Action

Nalorphine is a specific antagonist to excessive dosage of narcotic analgesics. It reduces respiratory and circulatory depression resulting from narcotics, but diminuation of narcosis is less prominent. It is not effective in counteracting the depressant effects of non-narcotic agents, such as barbiturates or general anesthetics.

Uses

The chief use of this drug is to reverse excessive respiratory depression resulting from an excessive dose of or unusual sensitivity to narcotics. Other uses are (1) to abolish alarming respiratory depression in addicts, (2) to prevent marked respiratory depression at the termination of intravenous narcotic analgesia, and (3) to prevent narcotic apnea in the newborn when the mother has severe narcotic-induced respiratory depression. Diagnostically, nalorphine can be used to test subjects for narcotic addiction.

Cautions

This drug is not effective in combating respiratory depression caused by other than narcotic agents. Its administration will produce violent withdrawal symptoms in patients addicted to narcotics, so administration must always be made cautiously. The concentration of 5 mg. per ml. is for adult use only; it must be diluted to 0.2 mg. per ml. for neonatal use. The drug should not be used concurrently with meperidine.

Side Effects

Untoward reactions include dysphoria, miosis, psuedoptosis, lethargy, drowsiness, sweating, pallor, nausea, and psychomimetic manifestations. Narcotic withdrawal symptoms may be experienced by some patients who have received several therapeutic doses of a narcotic.

Dosage

Nalorphine hydrochloride injection may be administered intravenously, intramuscularly, or subcutaneously. For rapid action the intravenous route is used. The usual initial adult dose for narcotic induced respiratory depression is 5 mg. (1 ml.) injected intravenously. This may be repeated twice at 10 to 15 minute intervals and may be increased to 10 mg. (2 ml.) if the desired increase in respiratory function is not attained immediately.

For reduction of neonatal respiratory depression, 1 ml. of diluted injection containing 0.2 mg. per ml. (1 ml. of the 5 mg. per ml. injection diluted to 25 ml. with isotonic sodium chloride for injection) is injected into the umbilical vein. This dose may be repeated at close intervals to a maximum to 0.5 mg. (2.5 ml. of the diluted injection).

For prevention of asphyxia neonatorum, a single dose of 5 to 10 mg. (1 to 2 ml. of the 5 mg. per ml. injection) is injected intravenously 10 to 15 minutes before delivery in the mother suffering from moderate or severe narcotic-induced respiratory depression.

Similar Preparations

Levallorphan Tartrate Injection, USP (Lorfan)

NEOSTIGMINE METHYLSULFATE INJECTION, USP

1:2000, 1 ml. ampul (Prostigmin Methylsulfate Injection)

Category

Cholinergic.

Action

Neostigmine is a parasympathetic stimulant. It acts as an inhibitor to the destruction of acetylcholine by cholinesterase. Its stimulant actions are most prominent on the bowel, urinary bladder, and skeletal muscle. It does not affect the pupil, heart, blood pressure, or secretions to any significant degree.

Uses

This drug is used in the prevention and treatment of postoperative atony of the intestines or urinary bladder, in the treatment of myasthenia gravis, and as an antidote for curare.

Cautions

Neostigmine is a very potent drug and must be administered with care. Atropine is an antidote for the muscarine-like actions of neostigmine. When large doses of neostigmine are given, simultaneous administration of atropine sulfate is advisable. Since hypersensitivity to neostigmine is sometimes encountered, atropine and antishock medications should be immediately available during its use.

The use of neostigmine is contraindicated in patients with mechanical intestinal and urinary obstruction. It should be administered with caution to asthmatics.

Side Effects

Untoward effects from the administration of this drug in the usual therapeutic dose are usually minor and can be controlled by the administration of atropine (either by injection or sublingual administration of 0.65 mg. (1/100 gr.) of atropine sulfate). Large

doses may produce restlessness, weakness, nausea, vomiting, purging, epigastric pain, miosis, salivation, lacrimation, sweating, palpitation with slowed pulse, dyspnea, muscular twitching, convulsions, bronchial spasms, and collapse.

Dosage

The usual dose for therapeutic use is 0.5 mg. (1 ml. of 1:2000 injection) every 4 to 6 hours injected intramuscularly or subcutaneously. Doses may be adjusted downward or upward according to the individual patient's response.

The prophylactic dose to prevent postoperative distention and urinary retention is 0.25 mg. (0.5 ml. of the 1:2000 injection) every 4 to 6 hours, starting immediately postoperatively and continuing for 2 or 3 days.

As an antidote for curare, 0.5 to 1 mg. (1 to 2 ml. of 1:2000 injection) is given intravenously.

Similar Preparations

Edrophonium Chloride, USP (Tensilon)
Neostigmine Bromide, USP
Physostigmine Salicylate, USP

NIKETHAMIDE INJECTION, NF, 25%

1½ ml. ampul

Category

Central nervous system stimulant.

Action

Nikethamide is an analeptic having a respiratory stimulant effect. It has little cardiovascular effect except for moderate peripheral vasoconstriction.

Uses

The chief use of nikethamide is to counteract the respiratory depression caused by narcotics, anesthetics, hypnotics, or other central depressants. Indicatons for its use include anesthetic overdosage; asphyxia in the newborn; poisoning with narcotics, barbiturates, carbon monoxide, or illuminating gas; acute alcoholism; and shock.

Cautions

Although this drug is a relatively mild stimulant, excessive doses may cause convulsions or respiratory failure.

Side Effects

None.

Dosage

The usual dose of nikethamide to compensate for moderate respiratory depression is 1 ml. of the 25% solution administered intramuscularly or intravenously. However, up to 15 ml. may be administered in a single intravenous dose in case of impending respiratory paralysis, followed by 5 ml. as often as every 5 minutes, if required. Artificial respiration, gastric lavage, oxygen, and other means of stimulation should be employed concurrently in cases of severe poisoning by central depressants.

For the treatment of asphyxia in the newborn, 1.5 ml. of the 25% injection is administered into the umbilical vein. In the case of cardiac arrest, 0.5 ml. may be administered intracardially.

Similar Preparations

Caffeine and Sodium Benzoate, USP
Pentylenetetrazol, NF (Metrazol)
Picrotoxin, NF
Strychnine Sulfate, NF

NITROUS OXIDE, USP

Filled Type M Cylinder, 2000 gal.

Category

General anesthetic.

Action

Nitrous oxide produces a rapid anesthesia when inhaled, partly by exclusion of oxygen. Recovery upon discontinuous of administration is equally rapid.

Uses

Nitrous oxide is used alone for anesthesia in surgical procedures of short duration, such as in dentistry. In combination with oxygen, it is used for longer procedures where a light anesthesia is adequate. Nitrous oxide is frequently used for the induction of anesthesia when ether is to be used as the chief anesthetic agent. It is also used for analgesia in obstetrics.

Cautions

Nitrous oxide is a weak anesthetic and cannot be used alone for any but the lightest grades of anesthesia unless considerable preanesthetic medication (morphine, scopolamine, barbiturates, etc.) or supplemental anesthetic agents (ether, cyclopropane, etc.) are used. This drug is probably the safest of the anesthetic agents, but it produces rapid asphyxia unless mixed with oxygen. Nitrous oxide should not be used in patients with cardiac lesions, either

valvular or myocardial; in elderly patients, especially with advanced arteriosclerosis or high cerebral pressure; and in patients having operations on the brain. It is often ineffective in hysterical, obese, muscular, or alcoholic patients.

Side Effects

Untoward effects during administration are due almost entirely to anoxia. The characteristic effects of the inhalation of nitrous oxide include, in the preliminary stages, a sweetish taste, numbness, exhilaration (laughter), confusion, deeper and quicker respiration, and fuller pulse. Partial anesthesia, with the onset of unconsciousness, is accompanied by dreams; possible excitement if disturbed; enlarged pupils; dusky, livid, or pallid complexion; and twitching and slightly separated eyelids. The onset of full anesthesia is denoted by a change in the respiration which becomes slightly irregular and noisy; the pulse becomes quickened and weakened; blood pressure rises; the pupils are dilated; the face is cyanosed; and although the limbs are relaxed, individual muscles exhibit clonic or epileptiform contractions.

After-effects are generally absent with short administration, although some patients may complain of giddiness, headache, lassitude, and drowsiness.

Dosage

For short operations, as in dentistry, the gas is administered full-strength through a tight-fitting mask.

For longer operations or for adjunctive administration with other anesthetics, a closed system employing an anesthesia machine is used. Oxygen is always used with this system of administration.

For analgesia, a mixture of 1 part of nitrous oxide with 2 parts of oxygen may be used.

Similar Preparations

Chloroform, USP
Cyclopropane, USP
Ether, USP
Ethylene, NF

OXYGEN, USP

Filled Type M Cylinder, 750 gal.

Category

Respiratory drug.

Action

Counteracts the effects of anoxia from any cause.

Uses

Oxygen is of greatest benefit in the treatment of conditions of anoxia which arise from inadequate oxygenation of the blood passing through the lungs, such as in pneumonia and pulmonary edema. It is also of benefit to patients suffering from severe asthma, acute coronary occlusion, shock, and carbon monoxide poisoning. Oxygen is routinely employed during the administration of anesthetic agents by the "closed" method.

Cautions

WARNING: During the use of oxygen, the fire and explosion danger should be kept in mind. Oil must not be used on oxygen valves or piping connections.

Prolonged breathing of oxygen concentrations above 65% will cause pulmonary irritation and certain more serious effects, particularly in infants, so that in applying oxygen therapy the minimum effective amount should be employed for the shortest possible period of time. However, in general, untoward effects are not sufficiently serious to interdict the use of high concentrations of oxygen when these are indicated.

Side Effects

The administration of high concentrations of oxygen for long periods can produce untoward effects, including pulmonary atelectasia, oxygen apnea, respiratory acidosis, retrolental fibroplasia, substernal distress, post-administration reduction in vital capacity, fatigue, paresthesias in the hands and feet, joint pain, anorexia, nausea, and vomiting.

Dosage

Oxygen may be administered by means of an oxygen tent, nasal catheter, face mask, or special positive pressure breathing apparatus. Concentrations may be varied upward from the normal 21% found in air to 100% pure oxygen as required by the degree of anoxia to be combated. In cases of acute oxygen deficiency, as, for example, following drowning or carbon monoxide poisoning, 100% oxygen is employed.

Similar Preparations

None.

OXYTETRACYCLINE-POLYMYXIN B OPHTHALMIC OINTMENT

Contains 0.5% Oxytetracycline and 0.1% Polymyxin B

Category

Ophthalmic antibiotic.

Action

The mixture of drugs used in this ointment provides a broad spectrum of antimicrobial activity, the oxytetracycline being chiefly effective against gram-positive bacteria and the polymyxin B being chiefly effective against gram-negative bacteria. The ointment is also effective against certain other infective organisms.

Uses

This preparation is used in the prophylaxis and treatment of superficial ocular infections, including dacryocystitis, blepharitis, hordeolum (sty), catarrhal conjunctivitis (pink eye), conjunctivitis neonatorum, gonococcal conjunctivitis, trachoma, inclusion conjunctivitis, corneal ulcer, keratitis, keratomalacia, and infections following trauma of the eye.

Cautions

Hypersensitivity to any of the ingredients of this preparation should be watched for. At the first sign of irritation, use of the product should be discontinued.

Side Effects

None.

Dosage

The usual method of administration for most conditions is to apply a small amount of the ointment inside the lower lid of the affected eye 3 times daily. For external inflammations of the eyelid, it may be applied directly to the affected area.

Similar Preparations

Bacitracin Ophthalmic Ointment
Chlortetracycline Ophthalmic Ointment
Erythromycin Ophthalmic Ointment
Neomycin Sulfate Ophthalmic Ointment
Tetracycline Ophthalmic Ointment

OXYTETRACYCLINE-POLYMYXIN B EAR DROPS

5 ml. (powder in dropper bottle with diluent)

Category

Otic antibiotic.

Action

This solution possesses wide-spectrum antibiotic activity against many bacteria, spirochetes, amebae, and fungi. The hygroscopic

vehicle used in the solution (94% propylene glycol) has a decongestant effect and softens, dehydrates, and cleans the infected area for better penetration of the medication.

Uses

Antibiotic ear drops are useful in the treatment of many infections of the middle ear or outer ear, including otomycosis, otitis media, external otitis, aural impetigo, aural *Herpes zoster*, and furunculosis.

Cautions

Prolonged use of this or any other antibiotic preparation may result in the overgrowth of non-susceptible organisms. Should sensitivity or idiosyncrasy occur, use of the medication should be discontinued.

Side Effects

None, except as noted under *Cautions* above.

Dosage

Instill 3 to 5 drops in the infected ear every 3 hours until the infection clears completely.

In local infections of the external ear canal, a wick of cotton or other suitable material should be moistened with the medication and inserted. The wick is remoistened in place with 3 to 5 drops of the antibiotic solution every 3 or 4 hours.

Similar Preparations

Chloramphenicol Otic Solution
Erythromycin-Polymyxin B Otic Solution
Neomycin Otic Solution
Polymyxin B Otic Drops
Tetracycline Ear Solution

OXYTETRACYCLINE TABLETS

0.25 Gm. (4 gr.) film coated (Terramycin Tablets)

Category

Antibiotic, antiprotozoan.

Action

Oxytetracycline has a broad spectrum of activity against microorganisms. It suppresses growth of most gram-positive bacteria, many gram-negative bacteria, spirochetes, and amebae. It is not effective against tuberculosis, nor against the viruses of colds and influenza. A number of bacterial genera and species ordinarily susceptible to this drug include strains which have natural or acquired resistance (particularly among the staphylococci).

Uses

Oxytetracycline is effective in treating a wide variety of infections, including those of pneumococci, streptococci, staphylococci, *Neisseria, Escherichia coli, Shigella,* pertussis, *Rickettsia,* intestinal amebae, and brucellosis. Many mixed infections and infections in which the causative agent has not been specifically identified also are frequently effectively treated with this drug.

Oxytetracycline (or chlortetracycline or tetracycline) is the preferred antibiotic for the treatment of primary atypical pneumonia, urinary tract infections by *Escherichia coli,* brucellosis, typhus and related rickettsiae, psittacosis, lymphogranuloma venereum, and leptospirosis. It is also useful in many other types of infection, including acute bronchitis, otitis media, mastoiditis, meningitis, peritonitis, abscesses, anthrax, actinomycosis, acute intestinal and extra-intestinal amebiasis, gonorrhea, syphilis, and yaws.

This antibiotic is also used orally to "sterilize" the bowel prior to intestinal surgery.

Cautions

Extended use of any member of the tetracycline group may result in an overgrowth of microorganisms not susceptible to the drug, particularly certain fungi. If secondary infections appear, discontinue the use of oxytetracycline and/or take other appropriate measures. Occasional hypersensitivity to oxytetracycline is encountered, necessitating a change to other therapy. Use of this drug during tooth development (last trimester of pregnancy, neonatal period, and early childhood) may cause permanent yellow or gray-brown discoloration of the teeth.

The use of aluminum hydroxide gel during oxytetracycline therapy should be avoided as it interferes with the absorption of the antibiotic.

Side Effects

Untoward effects from oxytetracycline therapy are usually mild, but serious effects may occur. After oral administration, as a result of local irritation, epigastric distress, heartburn, anorexia, nausea, and vomiting may develop. (Mild antacids or food taken with the drug reduce the incidence of such effects.)

Alteration of the intestinal flora upon continued use of this drug sometimes causes diarrhea and gastroenteritis.

Other side effects occasionally encountered include glossitis, stomatitis, proctitis, vaginitis, and dermatitis. If side effects are marked, use of the drug should be discontinued.

Dosage

The usual oral adult dose of oxytetracycline is 0.25 Gm. (1 tablet) 4 times a day continued for 1 to 3 days after the fever or other symptoms of the infection subside. In severe infections the size

of the dose and/or frequency of administration may be doubled in initial stages of treatment. For children, total daily dose should be 10 to 20 mg. per pound of body weight (in divided doses).

For chronic infections, maintenance doses of 50 mg. taken 4 times a day may be sufficient.

Similar Preparations

Chloramphenicol, USP (Chloromycetin)
Chlortetracycline Hydrochloride, NF (Aureomycin)
Erythromycin, USP
Penicillin G, USP
Streptomycin Sulfate, USP
Tetracycline Hydrochloride, USP

PENICILLIN G FOR INJECTION, USP

Buffered, 1,000,000 Units in bottle

Category

Antibiotic.

Action

This drug is a sodium or potassium salt of penicillin G, buffered with approximately 4.5% of sodium citrate.

Penicillin is both bactericidal and bacteriostatic to many gram-positive bacteria, particularly those of staphylococcal, streptococcal, pneumococcal, and clostridial infections, and some gram-negative bacteria, especially those producing gonococcal and meningococcal infections. As with other antibiotics, resistant strains of certain bacteria, particularly staphylococci, have developed during its use.

This product, being water soluble, is useful in obtaining high blood levels of penicillin rapidly.

Uses

Penicillin is the chief therapeutic agent in the treatment of gonorrhea and syphilis. It is very effective in combating the many cases of subacute bacterial endocarditis in which the causative organism is penicillin-sensitive. It is also used in the treatment of many other diseases, including diphtheria, anthrax, Vincent's infection, actinomycosis, leptospirosis, treponemal diseases, pneumonia, and meningitis. It is ineffective against colds, leprosy, and tuberculosis.

Cautions

Penicillin is essentially non-toxic, but varying degrees of hypersensitivity reaction occur in about 10% of the patients receiving this drug. The usual form of mild reaction is a skin rash. However, severe anaphylactic reactions may occur in some patients,

especially those with a history of asthma or other allergy. If symptoms of sensitivity appear, the medication should be discontinued immediately. In the event of shock reactions to the drug, epinephrine, parenteral antihistamines, penicillinase, oxygen, and respiratory aids should be employed as required.

Patients receiving penicillin should also be carefully observed during therapy for the appearance of new infections resistant to penicillin. Prompt adjunctive therapy should be instituted if such infections appear.

The use of penicillin should be restricted to those cases where its use is definitely indicated. Improper use may lead to acquired bacterial resistance and induced sensitivity to subsequent doses.

Penicillin in any form should not be administered to any patient having a history of hypersensitivity to this drug.

After being put into solution, product should be kept under refrigeration (35° – 45° F.). No significant loss of potency will occur within 7 days if solution is kept sterile and refrigerated.

Side Effects

The usual side effects produced by the administration of this drug are allergic in nature. If the skin rash or other effects produced are mild or can be controlled by the administration of antihistamines or cortisone, the use of penicillin may be continued. Other side effects sometimes observed, particularly in long-term therapy, are due to the overgrowth of penicillin-resistant organisms.

Dosage

This product must be dissolved in Sterile Water for Injection to make a total volume of 10 ml. before use. It may be administered either intramuscularly or intravenously as required. The usual adult intramuscular dose is 400,000 units four times a day; the usual intravenous dose is 10,000,000 units daily by drip infusion. These usual doses may be increased to 4 or 5 times these levels in acute infections. Dosages for children are usually calculated on the basis of body weight.

This form of penicillin may be used in conjunction with less soluble, longer-acting forms of the drug (such as procaine penicillin) to initially attain and maintain proper penicillin concentration in the blood.

Similar Preparations

Benzathine Penicillin G, USP
Chlortetracycline Hydrochloride, NF
Oxytetracycline Hydrochloride, NF
Phenoxymethyl Penicillin, USP (Penicillin V)
Procaine Penicillin G, USP
Streptomycin Sulfate, USP
Tetracycline Hydrochloride, USP

PENICILLIN G, PROCAINE, USP

Powder, for Aqueous Injection, 3,000,000 Units in bottle

Category

Antibiotic.

Action

This is a penicillin salt of relatively low solubility, which slowly releases penicillin G after deposition by intramuscular injection and thereby increases the duration of effective blood levels.

For the therapeutic action of penicillin see *Penicillin G for Injection.*

Uses

See *Penicillin G for Injection.*

Cautions

This product should not be used for initial therapy when prompt action is required, as in pneumonia, meningitis, and endocarditis. The soluble injectable form (Penicillin G for Injection) is required to insure rapid attainment of proper blood levels of penicillin.

Also see *Penicillin G for Injection* for other precautions pertaining to the use of penicillin.

Procaine penicillin is not for intravenous use.

After being put into suspension, this product should be kept under refrigeration (35° – 45° F.). No significant loss of potency will occur within 7 days if the solution is kept sterile and refrigerated.

Side Effects

See *Penicillin G for Injection.*

Dosage

This product must be suspended in Sterile Water for Injection or Sodium Chloride Injection to make a total volume of 10 ml. before use. The usual dose is 300,000 units once or twice a day, although up to 4 times this dose may be used to combat severe infections.

This form of penicillin may be used in conjunction with more soluble, rapid acting forms of the drug (such as sodium or potassium penicillin) to initially attain and maintain proper penicillin concentrations in the blood.

Similar Preparations

Benzathine Penicillin G, USP

Procaine Penicillin in Oil Injection, NF

Sterile Procaine Penicillin G with Aluminum Stearate Suspension, USP

Sterile Procaine Penicillin G Suspension, USP

PENICILLIN G TABLETS, USP

Buffered, 250,000 Units

Category

Antibiotic.

Action

This product is a sodium or potassium salt of penicillin G in tablet form for oral use. The tablets contain suitable buffering substances to reduce destruction of the penicillin by gastric acidity.

The action of penicillin is identical whether given orally or by injection (see *Penicillin G for Injection*), but 3 to 5 times as much is required by the oral route to be equally effective.

Uses

See *Penicillin G for Injection.*

Cautions

Oral penicillin therapy alone should not be relied upon in cases of severe infection, because of irregular absorption and relatively slow attainment of therapeutic concentrations in the blood. Also see *Penicillin G for Injection* for other precautions in the use of this product.

Side Effects

See *Penicillin G for Injection.*

Dosage

The usual dose for mild infections or as adjunctive therapy to other medication is 250,000 to 500,000 units (1 to 2 tablets) 4 times a day. One million units per dose (4 tablets) may be given 4 times a day for more severe infections.

In the therapy of moderately severe infections, initial treatment with soluble injectable penicillin is usually employed, followed by oral doses for maintenance.

Similar Preparations

See *Penicillin G for Injection.*

PENTOBARBITAL SODIUM TABLETS, NF

100 mg. (1 ½ gr.) (Nembutal Tablets)

Category

Hypnotic; sedative.

Action

This drug is a short-acting barbiturate, usually producing hypnotic and sedative actions within 15 to 30 minutes after administration. Sleep produced with pentobarbital usually lasts only 2 to 4 hours and is essentially free from postsomnial lassitude. This drug does not have analgesic nor antiepileptic actions.

Uses

Pentobarbital is employed in a variety of diseases and syndromes where sedation or sleep is needed. It is used in simple insomnia, anxiety states, hyperexcitability, hysteria, acute maniacal states, and impending delirium tremens. It is also effective as an anticonvulsant in strychnine poisoning, tetanus, and certain other conditions. Pentobarbital sodium tablets are also widely used as a preanesthetic and preoperative sedative. In obstetrics it is often used alone or in conjunction with morphine or scopolamine.

Cautions

The use of barbiturates is contraindicated in patients with known sensitivity or previous addiction to these drugs and in elderly patients who exhibit nocturnal confusion and restlessness. Caution should be exercised in administering pentobarbital to patients with liver disease, fever, hyperthyroidism, diabetes mellitus, severe anemia, latent or manifest porphyria, or congestive heart failure.

Pentobarbital may be habit forming. Do not administer to ambulant patients engaged in activities requiring alertness.

Overdoses cause a comatose state and death, if poisoning is serious enough. In treating cases of poisoning, maintenance of effective respiration is very important. Oxygen should be administered, plus artificial respiration if required. Patient should be kept warm and a central nervous system stimulant administered.

Side Effects

Ordinarily none, but patients with an idiosyncrasy to barbiturates may exhibit drug hangover, excitement, localized or diffused myalgia, neuralgia, or arthralgia.

Dosage

As a sedative the usual dose is 50 mg. (½ tablet) taken orally once or twice a day. For use as a hypnotic, the usual dose is 100 mg. (1 tablet) taken once or twice a day, although this may be increased to 200 mg. (2 tablets) if required. As a preanesthetic sedative, the usual procedure is to give 100 mg. (1 tablet) the evening before and 200 mg. (2 tablets) ½ to 1 hour before the operation. Reduced doses are used for children in accordance with body weight.

In obstetrics the usual dose is 200 to 300 mg. (2 to 3 tablets) taken orally after the cervix is fully dilated and pains occur regularly at 5-minute intervals.

Similar Preparations

Cyclobarbital Calcium, NF (Phanodorn)
Heptabarbital (Medomin)
Phenobarbital, USP
Secobarbital Sodium, USP (Seconal)

PETROLATUM, LIQUID, USP

Category

Laxative.

Action

Liquid petrolatum is a mild laxative by its mechanical action in lubricating the intestinal tract and softening the feces.

Uses

This drug is used to relieve temporary intestinal stasis. It is also employed as a fecal softener following hemorrhoidectomy or in patients with hernia, aneurysm, hypertension, or cerebrovascular diseases.

Cautions

Liquid petrolatum should be taken at bedtime *only*. It should not be administered with meals. As with any laxative, continuous use should be avoided because of its interference with normal peristaltic action and the possibility of producing chronic stomatitis, colitis, or anal irritation. Excessive use of liquid petrolatum may impair appetite, reduce absorption of fat-soluble vitamins, and cause deposition of the drug in the liver and mesenteric lymph nodes. Administration to infants should be avoided as much as possible.

Do not administer liquid petrolatum or any other laxative or cathartic in the presence of gastrointestinal pain or other symptom of unknown cause.

Side Effects

None ordinarily observed when used occasionally in the proper dosage.

Dosage

The usual adult dose of petrolatum is 15 ml. (1 tablespoon), although 30 ml. (2 tablespoons) may be administered if required. The dose is administered at night before retiring. For children 6-12 years of age the dose should be 5 to 10 ml. (1 to 2 teaspoons); for children 1-6 years of age, the dose is 2.5 ml. (½ teaspoon) or even less for very young children. To improve palatability, liquid petrolatum may be mixed with a suitable vehicle such as orange juice.

Similar Preparations

Cascara Sagrada Extract, NF
Cascara Sagrada, USP
Castor Oil, USP
Liquid Petrolatum Emulsion, NF
Phenolphthalein, NF

PETROLATUM, WHITE, USP

Category

Oleaginous ointment base.

Action

Applied externally to the skin, petrolatum has emollient, protective, and demulcent actions.

Uses

Petrolatum is used externally to treat minor skin irritations and cracks and roughness caused by wind, cold weather, sunburn, skin diseases, or first degree burns. It is also frequently used as a vehicle for other medications to be applied externally in the form of ointments.

Cautions

The use of petrolatum on severe burns is not recommended.

Side Effects

None.

Dosage

Apply petrolatum sparingly to the affected area and rub in gently.

Similar Preparations

Hydrophilic Ointment, USP
Hydrophilic Petrolatum, USP
Petrolatum, NF (Yellow Petrolatum)
White Ointment, USP

PHENOBARBITAL TABLETS, USP

32 mg. (½ gr.)

Category

Hypnotic; sedative.

Action

This drug is a long-acting barbiturate, usually producing hypnotic and sedative actions in about 30 to 60 minutes after administration. Sleep induced with phenobarbital usually lasts 4 to 6 hours or longer and is frequently followed by postsomnial lassitude. Phenobarbital has effective antiepileptic and anticonvulsant actions but no analgesic effect.

Uses

Phenobarbital is employed for essentially the same uses as Pentobarbital Sodium Tablets. It is employed when its longer action is judged to be an advantage. In addition, phenobarbital is very effective for the suppression of epileptic seizures of all kinds.

Cautions

See *Pentobarbital Sodium Tablets.*

Side Effects

Essentially the same as for Pentobarbital Sodium Tablets, except that drug hangover is a much more common effect with this product.

Dosage

As a sedative the usual dose is 32 mg. (1 tablet), taken orally up to 4 times a day. For mild sedation 16 mg. (½ tablet) may be used as the dose. The average hypnotic dose is 100 mg. (3 tablets), repeated as required up to a maximum of 0.6 Gm. (20 tablets) per day for control of severe symptoms. For the control of epileptic seizures, the usual dose is 100 mg. (3 tablets) twice or more daily.

Similar Preparations

Barbital, NF
Butabarbital Sodium, USP
Mephobarbital, USP
Pentobarbital Sodium, USP

PHYSOSTIGMINE SULFATE OPHTHALMIC OINTMENT, 1/4%

Category

Cholinergic (ophthalmic).

Action

When applied to the eye, physostigmine causes constriction of the pupil, spasm of accommodation (near vision), twitching of the eyelid, and lowering of the intraocular pressure. Miosis usually lasts for one to three days after application, unless the effect is counteracted by the subsequent administration of atropine. The spasm of accommodation generally lasts for about three hours.

Uses

Physostigmine sulfate ophthalmic ointment is used to counteract the effects of atropine, to break up adhesions of the iris and lens (in alternation with atropine), in the treatment of peripheral corneal ulcer, and to lower intraocular pressure in glaucoma.

Cautions

In certain exceptional patients, this drug may cause an increase rather than a decrease in intraocular pressure and thus may precipitate an attack of glaucoma in predisposed individuals.

Side Effects

Temporary macropsia may be experienced by some individuals upon the ocular use of physostigmine.

Dosage

Apply a small amount of the ointment inside the lower eyelid as necessary to maintain miosis or counteract mydriasis. The usual frequency of application required is once a day, preferably at night.

Similar Preparations

Acetazolamide, USP (Diamox)
Carbachol, USP
Isoflurophate Ophthalmic Solution, USP
Neostigmine Bromide, USP
Neostigmine Methylsulfate, USP
Physostigmine Salicylate, USP
Pilocarpine Hydrochloride, USP

PITUITARY, POSTERIOR, INJECTION, USP

10 units per ml., 1 ml. ampul (Pituitrin Injection)

Category

Posterior pituitary hormone (mixed).

Action

This product contains the oxytocic, pressor, and antidiuretic principles of the posterior pituitary gland. The actions are due chiefly to its content of two polypeptides, oxytocin (Pitocin) and vasopressin (Pitressin). Posterior pituitary injection has a direct stimulative action on smooth muscle, particularly of the blood vessels, uterus, intestines, and urinary bladder. Its administration produces a rise in blood pressure and increases renal tubular resorption of water, retarding urinary secretion.

Uses

This drug is used in combating intestinal distention and paresis following abdominal operations or due to infections; for atony of the urinary bladder; to stimulate uterine contractions and control hemorrhage in obstetrics; and to reduce urinary output in diabetes insipidus.

Cautions

The use of this product is contraindicated in patients with angina pectoris, coronary thrombosis, toxema of pregnancy, hypertension due to nephritis or other causes, arteriosclerosis, or epilepsy. In obstetrics, it should not be used in labor before full dilation of the cervix.

Side Effects

Since posterior pituitary injection is a mixed hormone, any of the hormonal actions not specifically desired in the patient being treated may be considered as side effects. For this reason, puri-

fied extracts of posterior pituitary are sometimes employed to limit the action to that desired.

Dosage

The usual dose of posterior pituitary injection is 10 USP units (1 ml.) given subcutaneously, although intramuscular injection may also be used. Smaller doses down to 2 USP units are sometimes employed if the desired effects are obtained. The dose may be repeated in 3 to 4 hours if necessary, as, for example, during surgery.

In the therapy of diabetes insipidus (not diabetes mellitus), the required dose may vary from 5 USP units (0.5 ml.) every 2 or 3 days to 10 USP units (1 ml.) three times daily, continued indefinitely.

Simliar Preparations

Oxytocin Injection, USP (Pitocin)
Vasopressin Injection, USP (Pitressin)
Vasopressin Tannate (Pitressin Tannate)

POTASSIUM CHLORIDE SOLUTION, USP

20 mEq. per 10 ml., 10 ml. ampul

Category

Electrolyte replenisher.

Action

This product is used to provide replacement potassium for the body in cases of potassium depletion.

Uses

This injection is added to intravenous solutions as a prophylactic measure against hypopotassemia or as a replenishment for lost potassium in cases of actual potassium deficiency. The latter may result from low potassium intake, disproportionately high intake of sodium, dextrose, or chloride, or excessive potassium loss. The potassium loss may result from persistent vomiting, diarrhea, starvation, severe trauma, renal failure, severe alkalosis, or hyperadrenalism.

Cautions

Potassium should not be used in the presence of severe dehydration or impaired kidney function. Overdoses may produce symptoms of potassium intoxication, including listlessness, mental confusion, numbness and tingling of the extremities, weakness and heaviness of the legs, pallor, bradycardia, arrhythmia, peripheral vascular collapse, rapidly ascending flaccid paralysis, or cardiac arrest.

Side Effects

None, if electrolyte balance in the body is maintained. See *Cautions* above for effects of hyperpotassemia.

Dosage

For prophylactic use in intravenous solutions, 10 ml. of the potassium chloride solution (the contents of one ampul) are added to 1000 ml. of the dextrose or sodium chloride intravenous solution before administration of the latter. The concentration of the potassium may be doubled to twice this value in cases of threatened hypopotassemia.

Similar Preparations

Lactated Ringer's Injection, USP
Ringer's Injection, USP

PROCAINAMIDE HYDROCHLORIDE INJECTION, USP

100 mg. (1 ½ gr.) per ml., 10 ml. bottle
(Pronestyl Hydrochloride Injection)

Category

Cardiac depressant (anti-arrhythmic).

Action

Procainamide has cardiac depressant effects essentially identical to those of quinidine, although with certain patients one or the other of the two drugs may prove to be more efficacious. The physiological action of procainamide includes depression of myocardial excitability, slowing of conduction, and increasing of the refractory period, particularly that of the atrium.

Uses

This drug is useful in treating arrhythmias of ventricular origin, including ventricular extrasystoles, paroxysmal ventricular tachycardia, and ventricular fibrillation. It is also somewhat effective in treating certain atrial arrhythmias, particularly paroxysmal atrial tachycardia, atrial flutter, and atrial fibrillation, although quinidine should be considered the drug of choice in such conditions, especially for treating paroxysmal atrial tachycardia.

Procainamide hydrochloride injection is frequently used during surgery to correct cardiac arrhythmias. It is often employed prophylactically during surgical anesthesia in patients with known heart conditions or those undergoing thoracic surgery.

Cautions

Hypotension may occur during intravenous use of this product,

particularly in conscious patients. The rate of administration should be carefuly controlled so as to not exceed the recommended maximum rate given under *Dosage* below. Frequent checks of blood pressure during administration should be made and the dosage reduced if necessary. The injection should be discontinued if cardiac arrhythmias increase or if evidence of impending heart block appears.

The possible development of agranulocytosis or leukopenia should be watched for and the drug discontinued immediately if either develops. Continued use in patients with liver or kidney disease may be hazardous because of accumulation of the drug in the body.

Most of the untoward effects of the use of procainamide injection occur only upon intravenous use, so that for routine parenteral administration the intramuscular route is recommended, reserving the intravenous route only for those cases requiring very rapid effects. It is not advisable to employ the intravenous route unless the patient's heart action is being monitored by an electrocardiograph.

Side Effects

Occasional hypersensitivity may be encountered in the use of this drug, leading to allergic reactions.

Dosage

For the treatment of ventricular tachycardia, the usual dose is 0.5 to 1 Gm. (5 to 10 ml.) injected intramuscularly at a rate of 100 mg. (1 ml.) per minute. The dose is repeated every 6 hours. Not more than 1 Gm. (10 ml.) should be administered to a conscious patient at one time. The patient should be lying on his back during administration.

For use during anesthesia, the rate of administration may be doubled to 200 mg. (2 ml.) per minute and the total dose given may exceed 1 Gm. if required. The administration may be either intramuscular or intravenous, the latter route being used only if very rapid action is required and heart action is being monitored by electrocardiograph. When used intravenously, the effectiveness of the dose can be more easily judged, and as little as 100 mg. (1 ml.) may be given if this produces the desired effects.

Similar Preparations

Procainamide Hydrochloride Capsules, USP
Quinidine Gluconate, NF
Quinidine Sulfate, USP

PROMETHAZINE HYDROCHLORIDE INJECTION, USP

25 mg. (⅜ gr.) per ml., 1 ml. ampul
(Phenergan Hydrochloride Injection)

Category

Antihistaminic.

Action

Promethazine is a potent antihistaminic agent with prolonged duration of action. This drug also possesses useful sedative, antiemetic, and tranquilizing actions. When used with central nervous system depressants, anesthetics, analgesics, and certain other drugs, promethazine has an enhancing and potentiating action, permitting reduced dosages of these products.

Uses

Promethazine is effective in combating allergic reactions of all types responding to antihistaminic therapy. It is also useful as a sedative and as an agent for the control of motion sickness.

It is widely used in surgery and obstetrics to relieve apprehension, relax the patient, produce light sleep, reduce the amount of anesthetics or analgesics required, and prevent minor blood transfusion reactions of allergic nature. In dental surgery it is useful in the prophylaxis of swelling, pain and trismus.

Cautions

Untoward reactions from drug are rare. Because of the synergistic reaction with central nervous system depressants, the latter should be used with caution and in reduced doses when promethazine is used concurrently. Sedative action of promethazine in therapeutic doses should be kept in mind when administering it to ambulatory patients. They should be warned about engaging in activities requiring alertness, unless it is known that dosage being used does not produce drowsiness or dizziness.

Side Effects

Occasional patients may experience dryness of mouth, blurring of vision, or dizziness from the use of promethazine.

Dosage

For most indications, the average therapeutic dose is 25 mg. (1 ml.) administered intramuscularly or intravenously, repeated at 2 to 6 hour intervals as necessary. Smaller doses producing the desired effects or larger doses up to 1 mg. per Kg. (0.5 mg. per lb.) of body weight may be used if required. If administered intravenously, the rate should not exceed 25 mg. (1 ml.) per minute. The dose for children is essentially the same as for adults, except for the maximum allowable as limited by body weight.

For preoperative sedation, usual dose is 50 mg. (2 ml.) for adults, 25 mg. (1 ml.) for children, administered the night before surgery. In obstetrics, 50 mg. (2 ml.) doses are ordinarily used.

Similar Preparations

Chlorpheniramine Maleate, USP (Chlor - Trimeton)
Diphenhydramine Hydrochloride, USP (Benadryl)
Promethazine Hydrochloride Tablets, USP
Tripelennamine Hydrochloride, USP (Pyribenzamine)

QUINIDINE SULFATE TABLETS, USP

0.2 Gm. (3 gr.)

Category

Cardiac depressant (anti-arrhythmic).

Action

Quinidine has cardiac depressant effects essentially identical to those of procainamide, although with certain patients one or the other of the two drugs may prove to be more efficacious. The physiological action of quinidine includes depression of myocardial excitability, slowing of conduction, and increasing of the refractory period, particularly that of the atrium. This drug refractory period, particularly that of the atrium. Drug decreases myocardial contractility and tends to lower blood pressure.

Uses

Drug is useful in preventing and treating various arrhythmias of the heart, particularly premature systoles of the atrium and ventricle, atrial fibrillation, and ventricular tachycardia. It is preferred over procainamide in the treatment of arrhythmias of atrial origin, particularly paroxysmal atrial tachycardia.

Cautions

The use of this drug is contraindicated in patients with bacterial endocarditis, marked cardiac enlargement, or complete heart block. Idiosyncrasy or overdosage may produce nausea, vomiting, respiratory distress, blurred vision, headache, confusion, vertigo, or ringing in the ears. Quinidine may produce an embolism or ventricular fibrillation in patients with valvular disease. Ventricular tachycardia or auricular flutter may also result in a certain few patients. The appearance of any severe untoward effects indicates the need for immediate cessation of the use of this drug.

Side Effects

Hypersensitive individuals may exhibit symptoms as described under *Cautions* above. Other gastrointestinal symptoms and thrombocytopenia also may occur in certain individuals. Long-term use in normal individuals may produce similar side effects.

Dosage

The usual dose of quinidine sulfate is 0.2 Gm. (1 tablet) taken orally, up to 6 times a day. However, a schedule for administration should be based upon the requirements of the individual case

involved. A usual procedure is to give 0.2 Gm. (1 tablet) and repeat in 2 hours. If no untoward symptoms develop in 12 hours, give 0.4 Gm. (2 tablets) from 3 to 5 times daily until normal heart rhythm is restored. If this does not occur within 10 days, the drug should be discontinued for 2 weeks and another course given. To prevent recurrence of arrhythmia in successfully treated cases, maintenance doses of 0.2 Gm. to 0.6 Gm. (1 to 3 tablets) daily may be required.

Similar Preparations

Procainamide Hydrochloride, USP
Quinidine Gluconate, NF

RINGER'S INJECTION, LACTATED, USP

1000 ml. bottle

Category

Fluid and electrolyte replenisher.

Action

This is an isotonic solution which closely approximates the composition of extracellular fluid in the body as to the electrolyte balance of calcium, potassium, and sodium. The sodium lactate content makes it effective in combating acidosis.

Uses

The uses of this solution are essentially the same as those of Sodium Chloride Injection. A specific indication for the use of lactated Ringer's injection in preference to the latter is in the management of acidosis associated with dehydration and loss of alkaline ions from the body.

Cautions

See *Sodium Chloride Injection.*

Side Effects

None.

Dosage

The usual dose of this product is 500 ml. (½ bottle) administered intravenously at a slow rate of 3 to 5 ml. per minute (1 to 2 drops per second). In the treatment of severe water depletion as in diabetic coma or burns, the amount of the dose and the rate of administration may be increased so that a total volume of 1000 ml. (the contents of 1 bottle) is infused in one hour (a rate of about 5 drops per second).

Similar Preparations

Dextrose Injection, USP, 5%
Dextrose and Sodium Chloride Injection, USP
Ringer's Injection, USP
Sodium Chloride Injection, USP

SCOPOLAMINE HYDROBROMIDE TABLETS, NF

0.6 mg. (1/100 gr.), Hypodermic

Category

Central nervous system depressant; parasympatholytic.

Action

Scopolamine is a parasympathetic blocking drug with marked sedative, hypnotic, and tranquilizing actions. It is similar to atropine both chemically and in physiologic action, but certain marked differences are present. In peripheral actions, scopolamine has more depressant effect on the oculomotor and secretory functions but less action on the vagus nerves. In central actions, scopolamine is a depressant in all doses, while atropine in moderate doses is an excitant. The effect of scopolamine on the heart, intestinal tract, and bronchial musculature is less than that of atropine.

Uses

This drug is used as a sedative and hypnotic in agitated or maniacal states, in delirium tremens, postencephalitic parkinsonism, paralysis agitans, spastic states, tetanus, narcotic or alcohol withdrawal, and other conditions requiring similar symptomatic treatment. Its mydriatic action is sometimes employed in ophthalmology.

A very important use of scopolamine is as a preanesthetic or obstetrical medication, alone or in combination with morphine (twilight sleep). It is also employed as a motion sickness preventive.

Cautions

The use of scopolamine is contraindicated in the presence of glaucoma and prostatic hypertrophy. As with atropine, it should be used with caution for patients with cardiac disease or patients over 40 years of age.

Scopolamine hydrobromide is extremely poisonous; overdoses may cause tachycardia, scarlatiniform rash, delirium, stupor, coma, respiratory failure, and death. (Pilocarpine is useful as an antidote.)

Scopolamine occasionally acts as an excitant causing delirium, especially in painful conditions if analgesics are not also given.

Side Effects

Average or large doses may cause dry mouth, flushing, bradycardia, mydriasis, blurred vision, or urinary retention.

Dosage

The usual dose of scopolamine hydrobromide is 0.6 mg. (1 tablet), dissolved in about 1 ml. of sterile water for injection,

administered subcutaneously by hypodermic injection. The tablets may also be used orally, but the dose is generally less effective by this route.

Higher doses, up to 1.2 mg. (2 tablets) may be required for control of symptoms in parkinsonism and spastic states. For preanesthetic medication or twilight sleep, the dose of scopolamine (0.6 mg.) is combined with 15 mg. (¼ gr.) of morphine.

Similar Preparations

Atropine Sulfate, USP
Hyoscyamine Hydrobromide, NF

SOAP, SURGICAL

With 2% Hexachlorophene, 4 oz. cake

Category

Local anti-infective; detergent.

Action

When used on the skin with water, this product, besides having the normal cleaning action of soap, possesses high germicidal activity, particularly against gram-positive organisms. Residual hexachlorophene retained on the surface of the skin greatly reduces the normal bacterial flora, particularly after repeated use.

Uses

This soap can be used for general skin cleansing of patients and for antiseptic scrubs by physicians, dentists, food handlers, and others. It can also be used for cleansing the skin (and thus reducing the danger of infection) after minor injuries, such as cuts or abrasions.

Cautions

Alcohol or alcohol-containing products should not be used in conjunction with or following the use of hexachlorophene surgical soap, as alcohol severely reduces the germicidal effectiveness of the hexachlorophene by removing it from the skin. A similar prohibition applies to acetone and other organic solvents.

Side Effects

None.

Dosage

The soap is used in the ordinary manner with warm water for skin cleansing. For surgical scrubs, a hand brush should be used in conjunction with the soap and water.

Similar Preparations

Hard Soap, NF
Hexachlorophene Liquid Soap, USP (Phisohex)
Medicinal Soft Soap, USP

SODIUM BICARBONATE TABLETS, USP

0.6 Gm. (10 gr.)

Category

Antacid.

Action

Internal administration of sodium bicarbonate rapidly neutralizes gastric acidity and produces systemic alkalosis. It may also have an effective action in dissolving excess gastric mucus and in relaxing a spasmodic pylorus.

Uses

Sodium bicarbonate is used internally to overcome hyperacidity of the stomach or urine. It is widely used in treating dyspepsia, heartburn, gastric flatulence, and cramps. It is also employed in the treatment of systemic acidosis resulting from diabetes, post-anesthetic nausea, certain types of nephritis, and other diseases. In cystitis and various metabolic diseases, such as gout, it is used to overcome undesirable acidity of the urine.

Sodium bicarbonate may be administered with sulfonamide drugs to insure alkalinity of the urine and thus reduce the likelihood of crystalluria.

Externally sodium bicarbonate solutions are used as mildly alkaline washes for the nose, mouth, or vagina. A diluted solution is also used as a cleansing enema. A saturated solution is sometimes used on minor burns to alleviate pain.

With sodium chloride this product can be used to prepare an oral electrolyte solution. (See *Sodium Chloride-Sodium Bicarbonate Mixture* for uses).

Cautions

Excess administration of this drug may cause alkalosis, particularly in patients suffering from renal dysfunction. Its use, except in small amounts, is contraindicated in conditions calling for limitation of sodium intake, such as chronic hypertension and edemic tendencies. Is is not recommended for the treatment of hyperacidity in association with peptic ulcer.

Side Effects

None, except that the use of alkalizers such as this drug may stimulate gastric secretion of hydrochloric acid (so-called "acid rebound").

Dosage

The usual dose of sodium bicarbonate for most indications is 2 Gm. (3 tablets) taken orally, up to four times a day. As a mild antacid, 0.6 Gm. (1 tablet) may be used. Up to 4 Gm. (6 tablets) per dose may be administered if required.

For external use an isotonic solution (about 1.3%; 1 tablet in 50 ml. of water) is satisfactory for most purposes.

As an alkalizing agent during the administration of sulfa drugs, an initial dose of 4 Gm. (6 tablets), followed by 2 Gm. (3 tablets) every four hours is recommended.

Similar Preparations

Aluminum Hydroxide Gel, USP
Bismuth Subcarbonate Tablets, NF
Calcium Hydroxide, USP
Dried Aluminum Hydroxide Gel Tablets, USP

SODIUM CHLORIDE TABLETS, USP

5 ml. ampul (Normal Saline Solution)

Category

Injection vehicle.

Action

This ampuled product is intended for use in dissolving hypodermic tablets or other drugs to prepare sterile solutions for injection. It is isotonic with body fluids and hence causes a minimum of irritation.

Uses

Ampuls of sodium chloride injection are intended for preparing or diluting solutions for injection only. For therapeutic uses, see *Sodium Chloride Injection*, 1000 ml.

Cautions

In preparing solutions for injection, precautions must be taken to avoid contamination and maintain sterility.

Side Effects

None.

Dosage

According to dosage of the active ingredient with which this product is used.

Similar Preparations

Dextrose Injection, USP, 5%
Sterile Water for Injection, USP

SODIUM CHLORIDE INJECTION, USP

1000 ml. bottle (Normal Saline Solution)

Category

Fluid and electrolyte replenisher.

Action

This is an isotonic solution, containing 0.9% w/v of sodium chloride, which supplies an electrolyte and water to the body when injected intravenously or by hyperdermoclysis.

Uses

This product is used chiefly for the treatment of dehydration and electrolyte loss from the body. Dehydration may result from excessive sweating, reduced fluid intake, persistent vomiting, diarrhea, or fluid loss from severe burns. Salt depletion may be caused by diabetic acidosis, excessive sweating, severe burns, adrenal cortical hypofunction, repeated paracentesis for removal of ascitic fluid, certain forms of nephritis, loss of fluid through fistulas or exudation, or abnormal losses of gastorintestinal secretions through vomiting or diarrhea.

This product is also used as a vehicle for administering certain drugs by continuous infusion.

Cautions

Parenteral administration of this product in excess of the quantities that can be accommodated by the patient's circulatory function results in edema.

Dosage

See *Ringer's Solution, Lactated.*

Similar Preparations

Dextrose Injection, USP, 5%
Dextrose and Sodium Chloride Injection, USP
Lactated Ringer's Injection, USP
Ringer's Injection, USP

SODIUM CHLORIDE-SODIUM BICARBONATE MIXTURE

4.5 Gm. packets (Sodium Chloride, USP, 3 Gm.; Sodium Bicarbonate, USP, 1.5 Gm.)

Category

Fluid and electrolyte replenisher.

Action

This product is intended for preparing solutions for oral use for electrolyte and fluid replenishment in patients suffering extracellular fluid loss from any cause. The mixture restores sodium balance and relieves the acidosis resulting from dehydration.

Uses

The solution prepared from this product is used as an oral administration to counteract body fluid loss from severe burns, persistent vomiting, diarrhea, or excessive sweating. It is useful in treating heat illness, heat exhaustion, heat stroke, and heat cramps.

For many conditions requiring the administration of blood or plasma extenders or the intravenous injection of an electrolyte

solution, oral administration of this product may be used as a temporary substitute measure.

Cautions

Solutions prepared from this drug mixture are intended for oral or external use only. Do not administer by injection. Do not give to an unconscious person except by means of a suitable gastric or nasogastric tube. In cases of severe burns or shock, the use of this product should be considered as a stop-gap measure only and proper intravenous therapy should be instituted as soon as possible.

Side Effects

None.

Dosage

The contents of one packet (4.5 Gm.) should be dissolved in one quart (1000 ml.) of water to prepare the solution for use. The solution is administered to a conscious patient as can be tolerated, 4 to 8 fl. oz. (½ to 1 glassful) every 15 minutes for 2 or 3 hours or longer, depending upon the severity of the condition. As much as one quart for every 20 pounds of body weight may be required during the first 24 hours in cases of severe dehydration. In general, the patient's thirst is the best guide to the volume required. The patient should not be forced to drink more than he can comfortably tolerate. Cooling of the solution before administration will increase its palatability to the patient.

Similar Preparations

Sodium Bicarbonate Tablets, USP
Sodium Chloride Injection, USP
Sodium Chloride Tablets, USP

SODIUM CHLORIDE TABLETS, USP

2.25 Gm. (34.7 gr.)

Category

Electrolyte replenisher; ingredient for preparing physiological salt solution.

Action

This product is intended for use in the preparation of Sodium Chloride Solution, USP. The latter solution is isotonic with body fluids and hence causes a minimum of irritation when used on mucous membranes.

Uses

Sodium chloride solution prepared from these tablets is uesd as an oral medication for fluid or salt deficiency, as a vehicle for external or oral medications, and as an external wash.

With sodium bicarbonate this product can be used to prepare an oral electrolyte solution (see *Sodium Chloride-Sodium Bicarbonate Mixture* for uses).

Cautions

This product is intended for preparing non-injectable solutions only. The tablets are not intended for direct oral administration without being first dissolved in water. For injectable requirements Sodium Chloride Injection should be used.

Side Effects

None.

Dosage

One tablet (2.25 Gm.) dissolved in 250 ml. (8 fl. oz.) of water makes an isotonic sodium chloride solution (0.9%). This solution is used orally or externally as required.

Similar Preparations

Sodium Chloride, USP
Sodium Chloride Injection, USP
Sodium Chloride-Sodium Bicarbonate Mixture

SPONGE, ABSORBABLE GELATIN, USP

Sterile, 80 x 125 x 10 mm. (Gelfoam)

Category

Local hemostatic.

Action

When applied to bleeding tissue, this product acts as a hemostatic agent partly by tampon action and partly by the liberation of thrombolplastin from damaged platelets which become traumatized by the walls of the interstices of the foam structure. When left implanted in tissue it is completely absorbed in 4 to 6 weeks without excessive scar tissue formation.

Uses

This product is used as a hemostatic, absorbable sponge in all forms of surgical practice, including neurosurgery, gynecological surgery, traumatic rupture of the liver, liver repair surgery, otorhinolaryngologic surgery, proctologic surgery and epistaxis. It is also used as a packing material to fill cavities after pneumonectomy, liver surgery, or thoracoplasty.

Cautions

This product should not be implanted in grossly contaminated or infected wounds. Do not use if the original sterile package has been previously opened or shows evidence of damage.

Side Effects

None.

Dosage

Before use, the sheet of sponge is cut or molded with sterile technique to the desired size and shape. It is then compressed to expel part of the air and is saturated with thrombin solution or sterile isotonic sodium chloride solution. The sponge is then applied to the bleeding area with gentle pressure for 10 to 15 seconds. It may be removed later or left in place as appropriate to the particular procedure. Gelatin sponge is occasionally used in the dry state, blood serving to moisten the sponge.

Similar Preparations

Gelatin Film (Gelfilm)
Oxidized Cellulose, USP

STREPTOMYCIN SULFATE, USP

Equivalent to 1 Gm. (15 gr.) of Streptomycin Base in bottle

Category

Antibiotic.

Action

Streptomycin in even low concentrations is bacteriostatic to a large number of gram-negative and some gram-positive bacteria. It does not affect fungi, protozoa or viruses. As with other antibiotics, a number of resistant strains of various micro-organisms have developed.

Uses

This drug is effective in the treatment of tuberculosis, tularemia, meningitis, many forms of bacteremia, most urinary tract infections, plague, and granuloma inguinale. It is frequently employed with penicillin or sulfa drugs in the treatment of peritonitis, subacute bacterial endocarditis, bacillary pneumonias, whooping cough, and many coccal infections refractory to other drugs. Combined with one of the tetracyclines or sulfadiazine, streptomycin is used in the treatment of brucellosis. Chancroid and gonorrhea also respond to streptomycin, but penicillin is ordinarily preferred. Other conditions in which streptomycin has been found to be effective are bacillary dysentery, liver abscess, cholangitis, chronic pulmonary infections, and certain types of empyema. It is also used prophylactically in patients with severe wounds or about to undergo bowel surgery.

Streptomycin is not effective in typhoid fever, clostridial infections, syphilis, protozoal infections, mycoses, or viral infections.

Cautions

Although the acute toxicity of streptomycin is relatively low, most patients receiving this drug for more than two weeks develop some untoward reactions, chiefly vestibular derangements with mild to severe vertigo and tinnitus. Impaired hearing may occur

with a relatively small number of patients receiving high dosages parenterally. Patients should also be watched for renal irritation, shock, blood dyscrasias, skin eruptions, paresthesias about the face, tachycardia, hypotension, fever, flushing of skin, pain and tenderness at the site of injection, nausea, vomiting, and headache. Allergic reactions may be controlled with the administration of an antihistamine, but severe reactions of any type may require discontinuance of the use of the drug.

An overgrowth of organisms not susceptible to streptomycin may occur during therapy with this drug. If new bacterial or fungal infections appear, appropriate measures should be taken for their control.

Side Effects

Neurotoxic disturbances resulting in dizziness and ringing in the ears are the most frequent side effects. These symptoms may continue for several months after discontinuance of the use of the drug. Irreversible hearing loss may occur in rare instances.

Dosage

The usual dose of streptomycin sulfate is 1.25 Gm. daily (equivalent to 1.0 Gm. of streptomycin base) given by intramuscular injection in divided doses (one-third every 8 hours or one-fourth every 6 hours). The solution for injection is prepared by dissolving the contents of one bottle (equivalent to 1 Gm. of streptomycin base) in 5 to 10 ml. of sterile water for injection or sterile sodium chloride injection. Unused portions of the solution may be stored for up to 24 hours under refrigeration.

For severe fulminating infections the daily dose may be increased to 2 Gm. or even 4 Gm. of streptomycin base equivalent. With the larger doses, one-eighth of the total daily dose may be given every 3 hours. Smaller doses down to 0.5 Gm. of streptogiven every 3 hours. Smaller doses down to 0.5 Gm. are sometimes sufficient in treating chronic mild infections over long periods.

In streptomycin therapy it is important that full dosage be given at start of therapy as resistant strains of the infection may develop rapidly. In general, therapy should be continued for 48 hours after fever and other signs of infection have disappeared.

Streptomycin is also sometimes used subcutaneously, topically, locally (intrathecally, intraperitoneally, intrapleurally, or by inhalation), or intravenously. For intrathecal use the vehicle employed should be isotonic sodium chloride injection and the concentration of streptomycin base should not exceed 20 mg. per ml. For intravenous use, which should be by infusion only, 1 or 2 Gm. of streptomycin base equivalent should be dissolved in one liter of sodium chloride injection. The administration rate should not exceed 25 drops per minute.

Similar Preparations

Chlortetracycline Hydrochloride, NF
Penicillin G for Injection, USP
Procaine Penicillin G, USP
Penicillin-Streptomycin for Injection, NF
Oxytetracycline Hydrochloride, NF
Streptoduocin for Injection, USP
Tetracycline Hydrochloride, USP

SUCCINYLCHOLINE CHLORIDE INJECTION, USP

20 mg. (1/3 gr.) per ml., 10 ml. bottle

Category

Skeletal muscle relaxant.

Action

This drug is a neuromuscular blocking agent which produces rapid and complete relaxation of skeletal muscle for brief periods.

Uses

Single doses of succinylcholine chloride are employed to facilitate endotracheal intubation, to relax laryngospasm, to reduce convulsions in electroshock therapy, and to facilitate manipulation in orthopedic procedures. Administered by continuous intravenous infusion, the drug is used for skeletal muscle relaxation during longer periods when such is required during surgery (as for example, during open heart surgery).

Cautions

This drug should be administered only by anesthesiologists or those qualified to manage patients during apnea. Apparatus for assisted or controlled respiration with oxygen should be available during its use. Succinylcholine chloride should be used with great caution in patients with low levels of plasma cholinesterase resulting from liver disease, malnutrition, or previous treatment with cholinesterase inhibitors. Whole blood or plasma should be at hand for immediate use on such patients as required.

Intravenous procaine may intensify the action of this product. Similarly, curare-like muscle relaxants produce an additive relaxant effect with succinylcholine. Increased intraocular tension may occur on administration of this drug, so that this effect must be watched for in patients with glaucoma or undergoing an operation for cataract.

Before using full doses of this drug, an initial test dose of 10 mg. is advised so as to determine the patient's sensitivity and recovery time.

Side Effects

Most common is muscle twitching before relaxation, particularly if drug is injected rapidly. Slow injection is mandatory with fracture patients to avoid additional trauma from this effect.

Dosage

The average dose for a single injection is 20 mg. (1 ml.) administered intravenously. However, the dose required to produce the desired relaxant effect must be individualized with the particular patient; it may be as little as 10 mg. (0.5 ml.) or as much as 40 mg. (2.0 ml.).

When used for continuous intravenous infusion, the usual strength is 0.1% of succinylcholine chloride in 5% dextrose solution or physiological salt solution (5 ml. of succinylcholine chloride injection, 20 mg. per ml., diluted to 100 ml. with vehicle).

The 20 mg. per ml. strength of this drug is not ordinarily used for intramuscular injection.

Similar Preparations

Decamethonium Bromide (Syncurine)
Dimethyl Tubocurarine Chloride (Mecostrin Chloride)
Dimethyl Tubocurarine Iodide (Metubine Iodide)
Gallamine Triethiodide (Flaxedil)
Tubocurarine Chloride, USP

SUCCINYLSULFATHIAZOLE TABLETS, NF

0.5 Gm. (7½ gr.) (Sulfasuxidine Tablets)

Category

Antibacterial.

Action

Succinylsulfathiazole is a relatively insoluble sulfonamide drug, poorly absorbed in the gastrointestinal tract. It is employed chiefly for its local antibacterial effects against gram-negative organisms in the intestinal tract (especially *Escherichia coli*, dysentery bacilli such as *Shiga*, *Flexner* and *Sonne* strains).

Uses

This drug is used therapeutically in the treatment of acute bacillary dysentery, ulcerative colitis, and urinary tract infections due to *Escherichia coli*. It is used prophylactically, preoperative and postoperative, in bowel surgery and in the control of *Salmonella* carriers. It is not effective against typhoid fever.

Cautions

Because of its low solubility and slow absorption rate, this sulfonamide is less likely to produce toxic effects than more soluble

sulfa drugs such as sulfadiazine. However, it is judicious to observe the same precautions during its administration as those given for *Sulfadiazine Tablets* under *Cautions* and *Dosage*. Succinylsulfathiazole should not be administered in the presence of unrelieved obstruction of the intestine.

Side Effects

See *Sulfadiazine Tablets*. In addition, this drug causes semi-fluid and practically odorless stools.

Dosage

The usual course for the treatment of bacillary dysentery consists of an initial dose of 250 mg. (½ tablet) for each kilogram of body weight (but not to exceed a total of 18 Gm. or 36 tablets), followed by one-sixth of this dose every four hours until fever and diarrhea are absent for 48 hours and stool cultures are negative. For a person weighing 160 pounds or more, the initial dose should be 36 tablets, followed by 6 tablets every four hours thereafter as long as required.

Similar doses are recommended as an adjunct to bowel surgery, except that the therapy is continued from 5 to 7 days preoperatively and from 10 to 14 days postoperatively. During this prophylaxis the patient should be on a low-residue diet and mineral oil should be avoided.

During treatment with succinylsulfathiazole, the administration of sufficient fluids to produce a urinary output of at least one liter per day is recommended to decrease the possibility of crystalluria. Sodium bicarbonate may also be given to insure alkalinity of the urine. See *Sulfadiazine Tablets* for recommended dosage.

Similar Preparations

Phthalylsulfathiazole, USP (Sulfathalidine)
Sulfaguanidine, NF

SULFADIAZINE TABLETS, USP

0.5 Gm. (7½ gr.)

Category

Antibacterial.

Action

Sulfadiazine possesses a strong systemic antimicrobial action against a wide spectrum of both gram-positive and gram-negative organisms. In most circumstances the action of sulfadiazine is bacteriostatic, although bactericidal concentrations of the drug are sometimes attained in the urinary and intestinal tracts.

Uses

Sulfadiazine or other soluble sulfonamide is the drug of choice in the treatment of meningococcal infections (including meningitis,

pneumonia, septicemia, and acute endocarditis), *Shigella* dysentery, cholera, trachoma, chancroid, and many urinary infections (including those of *Salmonella, Shigella, Escherichia coli,* and *Staphylococcus*). In conjunction with streptomycin it is effective against plague; with streptomycin or a tetracycline, against influenzal meningitis and brucellosis; and with penicillin, against actinomycosis and certain cases of subacute bacterial endocarditis not responsive to the antibiotic alone.

Although this drug is effective against numerous other infections, it has been largely replaced by antibiotics for their treatment. Among these are streptococcal, staphylococcal pneumococcal, and gonococcal infections, anthrax, psitticosis, ornithosis, lymphongranuloma inguinale, and infections from *Klebsiella.* However, sulfadiazine does have a distinct use in combating staphylococcal infections caused by strains resistant to antibiotics. It is also frequently effective for long or continued therapy in place of penicillin when latter cannot be tolerated by patient.

Sulfadiazine has prophylactic uses in preventing the spread of meningococcal infections and in controlling outbreaks of bacillary dysentery in congested populations.

Sulfonamides are not effective against syphilis, yaws, malaria, tuberculosis, leprosy, typhoid, tetanus, tularemia, pertussis, diphtheria, and most viral and rickettsial infections.

Cautions

During administration of sulfadiazine, sufficient fluids to maintain a daily urinary output above 1 liter (1 quart) should be given to avoid crystalluria and urinary obstruction. If drug fever, rash, hepatitis, granulocytopenia, hemolytic anemia, leukopenia, neutropenia, hematuria, or conjunctival infection develop during the administration of a course of sulfadiazine, its use should be discontinued and fluids forced.

Side Effects

In addition to the untoward effects listed under *Cautions* above, a few hypersensitive individuals may experience nausea and vomiting, headache, dizziness, mental confusion or malaise.

Dosage

For adults the usual initial therapeutic dose is 4 Gm. (8 tablets) taken orally, and then 1 Gm. (2 tablets) every 4 hours. In less severe infections and for prophylaxis 1 to 3 Gm. (2 to 6 tablets) daily is usually sufficient.

For children the therapeutic dose should be based on body weight, 0.1 to 0.15 Gm. per kg. of body weight initially, then one-fourth the initial dose every 6 hours.

Concurrent administration of sodium bicarbonate during therapy with sulfadiazine may be employed. The usual dose is 4 Gm.

initially, then 2 Gm. every 4 hours. Adequate fluid intake during therapy must be maintained (sufficient to produce a urinary output of no less than 1 liter per day). The dose of sodium bicarbonate for children may be reduced in proportion to the dose of sulfadiazine.

Similar Preparations

Chlortetracycline Hydrochloride, NF
Oxytetracycline Hydrochloride, NF
Penicillin G Tablets, USP
Streptomycin Sulfate, USP
Sulfamerazine, USP
Sulfamethazine, USP
Sulfisoxazole, USP (Gantrisin)
Tetracycline Hydrochloride, USP
Trisulfapyrimidines Oral Suspension, USP
Trisulfapyrimidines Tablets, USP

TETANUS ANTITOXIN, USP

Therapeutic Dose, 20,000 units in bottle (Equine Origin)

Category

Biologic for prophylaxis and treatment of tetanus.

Action

This product contains antitoxic globulins or their derivatives that have the specific power of neutralizing toxin formed by *Clostridium tetani.*

Uses

Tetanus antitoxin is used prophylactically to confer passive immunity to tetanus following wounds when the patient has not been previously immunized with tetanus toxoid. It is particularly indicated for this use after wounds from gun shots or blank cartridges or where there has been laceration or crushing of tissue, or puncture from rusted nails, needles, or splinters, especially if dirt or soil has penetrated.

Tetanus antitoxin is used therapeutically to neutralize circulating tetanus toxin in cases in which the disease has become established.

It is recommended that tetanus toxoid be administered simultaneously with tetanus antitoxin prophylaxis or therapy. See *Tetanus Toxoid.*

Cautions

This drug is usually prepared from horse serum, which may cause severe or fatal reactions in sensitive patients. A preliminary sensitivity test should be employed where possible, particularly in

the case of patients with a history of allergy. However, a negative sensitivity test does not rule out the possibility of a delayed serum-sickness reaction.

A skin test for sensitivity may be performed by injecting 0.05 to 1 ml. of a 1:10 dilution of the regular concentration intradermally. A wheal appearing in 10 to 30 minutes is a positive reaction.

An eye test for sensitivity is done by instilling 1 drop of a 1:10 dilution of the regular concentration in the lower conjunctival sac. Lacrimation and conjunctivitis appearing in 10 to 30 minutes is a positive reaction. A positive conjunctival reaction may be terminated with 1 or 2 drops of epinephrine solution, 1:1000.

In patients showing a strong positive reaction, it is preferable to use a serum from other than equine origin (human or bovine), although the horse serum may be tolerated if properly diluted and administered slowly. Even mild or moderate reactions in the sensitivity test call for special techniques of administration. (See *Dosage* below.)

A second injection of tetanus antitoxin given in the period from 10 days to 4 months after the initial injection should be administered with caution because of the increased danger of producing anaphylactic shock during this period.

Side Effects

Nearly all reactions to tetanus antitoxin are allergic in nature. Highly sensitized individuals may have an immediate dangerous anaphylactic reaction even to a skin-test dose. Epinephrine injection, 1:1000, or an intravenous antihistaminic (e.g., promethazine hydrochloride injection), should be immediately available to counteract any hypersensitivity effects.

Serum sickness is sometimes observed as a delayed reaction to tetanus antitoxin. Fever, arthritis and urticaria, and often erythema and swelling of the injection site may develop as early as a few hours after injection or may develop gradually over 8 to 10 days.

Dosage

The usual prophylactic dose is 5000 units (one-fourth bottle) injected subcutaneously or intramuscularly near (but not at) the wound-site as soon as possible after the injury. For patients treated more than 24 hours after the injury, the dose should be 10,000 units (one-half bottle). Repetition of the dose may be required in a week or even sooner, depending upon the character of the wound.

The usual therapeutic dose is 40,000 units (2 bottles), one-half of this dose to be given intramuscularly and the other half intravenously. The intravenous portion should be diluted with 150

to 200 ml. of sodium chloride injection before use and should be infused slowly. Subsequent doses should be judged on the basis of the condition of the patient; as little as 5000 units per day given intramuscularly may be sufficient, or as much as 20,000 units every 6 to 8 hours may be needed intramuscularly or intravenously until symptoms are controlled.

In administering equine tetanus antitoxin to individuals with allergic tendencies or those showing mild or moderate sensitivity-test reactions, the initial dose should not exceed 0.1 ml. administered subcutaneously. If no reaction occurs in 30 minutes, 1.0 ml. may be injected intramuscularly. If again no reaction occurs, the remainder of the dose may be administered either intramuscularly or subcutaneously.

If reaction does occur during the above procedure or if the patient has exhibited a strong positive reaction to the sensitivity test, substitution of other than horse serum antitoxin should be made if at all possible. If the equine serum must be used, a series of injections at 15-minute intervals can be tried, starting with 0.5 ml. of a 1:20 dilution of the antitoxin solution administered subcutaneously. The size of the dose is gradually increased, the dilution gradually decreased, and intramuscular injection substituted for the subcutaneous injection when the undiluted injection is reached. If reaction occurs at any stage, the next dose should be decreased in volume or the concurrent administration of epinephrine or an injectable antihistamine may be tried.

Similar Preparations

Tetanus and Gas Gangrene Antitoxins, NF
Tetanus Toxoid, Absorbed, USP (for immunization only)

TETANUS TOXOID, ADSORBED, USP

(Alum Precipitated), (5 ml. bottle)

Category

Specific immunization agent for tetanus.

Action

Administration of this biologic produces active immunization against tetanus by causing the formation of tetanus antitoxin in the blood and tissues of the recipient.

Uses

The chief use of tetanus toxoid is prophylactic, a course of injections being given to confer immunity to tetanus. In patients with wounds in which the prophylactic use of tetanus antitoxin would

ordinarily be indicated, the use of a booster shot of tetanus toxoid may be substituted or administered simultaneously if it is known that a previous course of tetanus toxoid has been given within a few years. In any case, an injection of tetanus toxoid is recommended (see *Dosage* below).

Cautions

Elective immunization with tetanus toxoid should not be carried out in the presence of any acute infection or active respiratory disease. Use during therapy with corticosteroids should be avoided.

In patients with a history of allergy, a test dose (0.05 to 0.1 ml.) should be administered first and additional doses according to tolerance after a wait of 30 minutes. Epinephrine injection, 1:1000, should be immediately available for use in case anaphylactic shock develops.

As with all injections, precautions should be taken to avoid transmission of serum hepatitis or other infections between patients by using separate sterile syringes and needles for successive injections.

Side Effects

A stinging sensation may occur immediately after injection of this product. Mild to moderate local reactions of inflammation, induration, and tenderness for 24 hours are sometimes noted. Occasionally fever or malaise may occur. The use of hot or cold local applications may increase the severity of reactions and are contraindicated. A small subcutaneous nodule may form at the site of injection, but this gradually disappears in a few weeks.

Dosage

For primary immunization two doses of 0.5 ml. (or 1 ml. if so specified by the labeling) are given by deep subcutaneous or intramuscular injection 4 to 6 weeks apart. A booster injection of 0.5 ml. is recommended one year after primary immunization; a booster injection of 0.25 ml. or 0.5 ml. every 3 or 4 years thereafter. (By the use of special intradermal injection techniques booster injections of only 0.1 ml. may be sufficient.)

A booster injection of 0.5 ml. should be given to all immunized patients with puncture wounds or lacerations as soon as possible after injury. Injured patients, not immunized, should be started on a course of tetanus toxoid simultaneously with tetanus antitoxin treatment. (See *Tetanus Antitoxin.*)

Similar Preparations

Tetanus Antitoxin, USP
Tetanus Toxoid, USP (Fluid or Plain)

TETRACAINE HYDROCHLORIDE, USP

20 mg. (1/3 gr.) in ampul, dry, sterile, for spinal anesthesia
(Pontocaine Hydrochloride Niphanoid)

Category

Spinal anesthetic.

Action

This product is a specially prepared, freeze-dried, sterile form of tetracaine hydrochloride, USP, designed for preparing an injection for spinal anesthesia. The local anesthetic action of tetracaine when injected into the spinal canal produces block of the conduction of all types of nerves in the area over which the anesthetic diffuses, resulting in sensory, motor, somatic, and autonomic system paralysis.

Uses

This product is used to produce extensive nerve block anesthesia for surgery of short or medium duration. It is used in surgery on the lower extremities, perineal surgery, obstetrics, lower abdominal surgery, and upper abdominal surgery. Spinal anesthesia is preferred to general anesthesia in patients with cardiac or pulmonary disease, diabetes, or renal disease. This product can also be used for topical and local infiltration anesthesia if required, as well as for caudal analgesia.

Cautions

Spinal anesthesia should be performed only by trained anesthetists thoroughly familiar with the technique. It should not be used on patients suffering from hemorrhage, shock, hypertension, hypotension, cerebrospinal disease, or skin infection at the injection site. The fall in blood pressure and depression of respiration during its use must be counteracted by the intramuscular injection of sympathomimetic drugs, such as ephedrine, prior to and during anesthesia. Oxygen must be available for use during all operations employing spinal anesthetics.

Special techniques are required in the use of spinal anesthetics. Severe neurological complications, systemic toxicity, and death can result from improper administration.

Side Effects

Nausea and vomiting frequently accompany spinal anesthesia. Motor activity of the gastrointestinal tract may be greatly enhanced by spinal anesthesia unless controlled by pre-anesthetic medication with drugs such as morphine and scopolamine. Another common side effect is post-anesthetic headache, perhaps caused by the loss of spinal fluid through the needle wound of the dura.

Dosage

To prepare the injection for use for spinal anesthesia, the contents of the ampul are dissolved in dextrose injection, 10%, sodium chloride injection, or other special vehicle as required by the technique to be employed. The concentrations of tetracaine hydrochloride in the injection solution usually employed are 0.2% or 0.3% (the contents of one 20 mg. ampul dissolved in 10 ml. or 6.6 ml. of vehicle). For saddle block or low spinal anesthesia 1 to 3 ml. of 0.2% solution is customary; for median spinal anesthesia, 4 to 5 ml. of 0.3% solution is used; for high spinal anesthesia 5 ml. of 0.3% solution is the average dose. Some anesthetists prefer a 0.5% solution (contents of one ampul dissolved in 4 ml. of vehicle) for all uses, while others use as high as 1% concentration in certain techniques.

Similar Preparations

Dibucaine Hydrochloride, USP (Nupercaine Hydrochloride)
Piperocaine Hydrochloride, USP (Metycaine Hydrochloride)
Procaine Hydrochloride, USP

TETRACAINE HYDROCHLORIDE TABLETS

100 mg. (1 ½ gr.), for preparing topical anesthesia solutions
(Pontocaine Hydrochloride Tablets)

Category

Local anesthetic.

Action

This product is a water-soluble tablet suitable for use in the preparation of solutions for surface anesthesia. Tetracaine in aqueous solution when applied to mucous membranes produces a strong anesthetic effect by blocking conduction of nerve impulses. Aqueous solutions of tetracaine have no action on intact epidermis.

Uses

A suitable strength of solution prepared from tetracaine hydrochloride is used for topical anesthesia of the mucous membranes of the eye, nose, mouth, throat and urogenital tract. Such anesthesia is employed in minor surgical procedures, during instrument insertion and examination, or for the relief of pain.

Cautions

This product is not for use in preparing solutions for injection. The tablets are to be used for preparing solutions for topical use only. The tablets or solutions are not to be taken orally.

Application of tetracaine to mucous membranes should be limited to the amounts required to produce the desired depth and

area of anesthesia. Overdosage may cause nausea, vomiting, rapid pulse, syncope, and convulsions. Particular care is required when applying a local anesthetic to a mucous membrane which is traumatized, because of the greater absorption. Epinephrine (1:50,000 or 1:100,000) should be included in the formula of topical anesthetic solutions to be used over extensive areas to retard absorption. Caution should be used in administering topical anesthesia to patients with allergies, cardiac diseases, or hyperthyroidism, particularly when large areas (as in the trachea or urethra) are to be anesthetized.

Side Effects

Hypersensitivity reactions, such as urticaria, are occasionally encountered. The effects of systemic poisoning discussed under *Cautions* may occur in some patients.

Dosage

An anesthetic solution for use in the eye is prepared by dissolving one tablet (100 mg. of tetracaine hydrochloride) in 20 ml. of sterile water to make a 0.5% solution. One drop of this solution is instilled into the conjunctival sac as often as necessary to maintain anesthesia.

For most other uses a 2% solution is customarily employed. This is prepared by dissolving one tablet in 5 ml. of water. The solution may be applied locally, as required, in the form of an irrigation or a spray, or applied with compresses wetted with the solution.

Similar Preparations

Benoxinate Hydrochloride, USP (Dorsacaine Hydrochloride)
Cocaine, NF
Cyclomethycaine Sulfate (Surfacaine Hydrochloride)
Dibucaine Hydrochloride, USP (Nupercaine Hydrochloride)
Lidocaine Hydrochloride, USP (Xylocaine Hydrochloride)
Piperocaine Hydrochloride, USP (Metycaine Hydrochloride)

TETRACAINE OPHTHALMIC OINTMENT, USP

0.5% (Pontocaine Eye Ointment)

Category

Local anesthetic.

Action

This product when applied in the eye produces a strong anesthetic effect by blocking nerve impulses. The white petrolatum in the ointment provides an emollient action. It is essentially free from other actions on the eye.

Uses

Tetracaine ophthalmic ointment is used in the eye to produce anesthesia prior to manipulative procedures and for the relief of pain from operative trauma, burns, eye injuries, eye irritations, or disease.

Cautions

This ointment contains white petrolatum as a base. An aqueous solution of tetracaine hydrochloride prepared from Tetracaine Hydrochloride Tablets, or other aqueous base anesthetic, should be used if the presence of petrolatum in the eye will be objectionable.

Side Effects

None, except for very occasional allergenic reactions.

Dosage

Apply a small amount of the ointment inside the lower eyelid. Repeat as necessary to maintain anesthesia.

Similar Preparations

Benoxinate (Dorsacaine) Hydrochloride Ophthalmic Solution
Butyn Sulfate with Metaphen Ophthalmic Ointment
Metycaine with Merthiolate Ophthalmic Ointment
Tetracaine Hydrochloride Solution

TETRACYCLINE HYDROCHLORIDE FOR INJECTION, USP

Powder, 500 mg. (7½ gr.) in bottle

Category

Antibiotic.

Action

This product is a sterile dry mixture of tetracycline hydrochloride and a suitable buffer, usually sodium glycinate. It is intended for preparing solutions for intravenous injection. The action of tetracycline is essentially identical with that of oxytetracycline. (See *Oxytetracycline Tablets.*)

Uses

Injectable tetracycline hydrochloride is used only when special conditions prohibit the oral use of tetracycline (or oxytetracycline). Such conditions include a critical illness requiring large doses which would cause nausea and vomiting if given orally, inability of the patient to ingest medication because of unconsciousness or vomiting, or inadequate response to therapy by mouth. See *Oxytetracycline Tablets* for therapeutic uses of tetracycline.

Cautions

See *Oxytetracycline Tablets* for general precautions in the use of broad spectrum antibiotics.

This product is to be used only for intravenous administration. It is not intended for intramuscular use. In administering the injection, extravasation should be scrupulously avoided and the injection should be made relatively slowly.

Side Effects

Phlebitis of the injected vein sometimes occurs. Large doses (over 750 mg.) or a rapid administration of smaller doses may produce chill, fever, malaise, hypotension, vomiting, or backache.

Dosage

The usual intravenous dose of tetracycline hydrochloride for severe infections is 500 mg. (the contents of one vial) administered 4 times a day. In very acute cases, the total daily dose may be doubled, preferably by doubling the number of injections given. For many milder infections, a total daily dose of 0.5 Gm. or 1.0 Gm. (one-half given each 12 hours) is sufficient. The antibiotic therapy is usually continued for 48 hours after symptoms and fever have subsided.

To prepare the solution for intravenous injection, the contents of the vial (equivalent to 500 mg. of tetracycline hydrochloride) are dissolved in a convenient volume of sterile water for injection, isotonic sodium chloride solution, or 5% dextrose injection. The solution so produced is then diluted to a final concentration of not more than 5 mg. of antibiotic per ml. (contents of one vial made up to 100 ml. of the final dilution). The rate of injection should not exceed 2 ml. per minute. Intermittent intravenous infusion may be used with this product.

Similar Preparations

Chlortetracycline (Aureomycin) Hydrochloride for Injection, NF
Oxytetracycline (Terramycin) Hydrochloride for Injection, NF
Penicillin G for Injection, USP

THIOPENTAL SODIUM FOR INJECTION, USP

5 Gm. (75 gr.) in ampul (Pentothal Sodium)

Category

General anesthetic.

Action

This product is a sterile mixture of thiopental sodium and anhydrous sodium carbonate as a buffer. When solutions of this drug are injected intravenously, rapid anesthesia of short duration results through the central nervous system depressant action of the barbiturate component.

Uses

Thiopental sodium is used chiefly as a general anesthetic for short operative procedures. It can also be employed for basal anesthesia prior to the administration of inhalation or spinal anesthetics. Small doses are sometimes used in neuropsychiatric diagnosis and therapy.

Cautions

Anesthesia with thiopental sodium must be administered only by an anesthetist thoroughly trained in its use and well acquainted with its contraindications and dangers. It should not be used as a surgical anesthetic for operations of long duration (more than 30 minutes). Facilities for intratracheal oxygen administration should always be at hand during its administration. Product is not recommended for use in operations on upper respiratory tract, head, neck, or other area where respiratory obstruction may develop as a result of the operation. It should not be used in patients with severe wounds, shock, cardiac disease or decompensation, anemia, debilitation, or diminished respiratory exchange.

Respiratory depression may result from the use of thiopental sodium because of either an unusual sensitivity or an overdosage. Laryngospasm may occur during the induction of anesthesia. The strongly alkaline reaction of this product makes the avoidance of extravasation or arterial injection very important. Varicose veins should not be used for injection.

Thiopental sodium alone is not suitable for operations requiring complete muscular relaxation. Like all barbiturates, this drug may be habit forming, although this is not ordinarily a problem with the use to which this particular drug is put.

Aqueous solutions of thiopental sodium decompose on standing. Accordingly, the solution for injection should be freshly prepared immediately before the operation in which it is to be used.

Atropine or scopolamine should be used routinely prior to thiopental anesthesia to prevent laryngospasm, bronchiolar constriction, hiccough, sneezing, or cough. A second dose of the alkaloid may have to be given during the course of anesthesia. The use of excessive morphine prior to anesthesia should be avoided. If it is employed, 10 mg. (⅙ gr.) is usually adequate for an adult.

Side Effects

The usual side effects of any general anesthesia may be experienced. In general, however, these are minimal with barbiturate anesthesia. Postoperative recovery may be characterized by an initial period of restlessness followed by a long period of sleep.

Dosage

A 2.5% solution of thiopental sodium is ordinarily used for anesthesia (the contents of one 5-Gm. ampul made up to 200 ml. with

water for injection). The usual intravenous dose for induction of anesthesia is 2 to 3 ml. of this solution at the rate of 1 ml. every 5 seconds. After anesthesia is attained, the maintenance dose is 0.5 to 1 ml. as required according to the reactions of the patient, judgment being based on depth and rate of respiration, muscle tone, appearance of the eyes, pulse rate, blood pressure, phonation, and movements. The exact technique and rate of administration varies considerably as used by individual anesthetists. Maintenance of anesthesia may be by continuous drip if desired.

For the deeper levels of anesthesia oxygen is ordinarily administered routinely by nasal catheter, mask, or anesthesia machine. For very short operations or the lighter anesthesia levels, oxygen need not be used, but should be immediately available if required.

Similar Preparations

Chloroform, USP
Ether, USP
Hexobarbital Sodium, NF (Evipal Sodium)
Methohexital Sodium (Brevital Sodium)
Nitrous Oxide, USP
Thiamylal Sodium, USP (Surital Sodium)

TOLBUTAMIDE TABLETS, USP

Scored, 0.5 Gm. (7½ gr.) (Orinase Tablets)

Category

Hypoglycemic.

Action

Tolbutamide is an antidiabetic sulfonamide drug that is active when taken orally in reducing blood sugar concentration. The action is probably due to a stimulative effect on the beta cells of the pancreas of the body or to a protective action in preventing the destruction of insulin in the body. It is not effective in the absence of body capacity to produce insulin. The effects of a single dose usually extend over 24 hours.

Uses

Tolbultamide is used in the treatment of selected cases of diabetes mellitus. It is especially applicable in mild, uncomplicated, stable cases of adult onset which cannot be controlled by diet alone. In certain cases, administration of tolbultamide can reduce the insulin injection requirements.

Cautions

This product is not a substitute for insulin and cannot be used in the emergency treatment of diabetic acidosis. It is contraindicated as the sole therapy in juvenile or growth-onset diabetes; in

unstable, brittle diabetes; and in diabetes complicated by acidosis, ketosis, or coma. The use of this product for the control of diabetes or as a whole or partial replacement for the use of injected insulin in the control of diabetes should be instituted only by a physician employing daily observation and laboratory testing to ascertain that the blood sugar level is being adequately lowered. Because of the possibility of loss of effectiveness of this drug upon continued usage, patients should be instructed to report immediately any indication of ineffectiveness of the therapy with tolbutamide. A regular check of the blood sugar level should be made every 3 or 4 months.

Side Effects

Untoward reactions from this drug are relatively minor and usually disappear once the proper maintenance dose and schedule have been established by experimentation. Side effects that have been observed include headache, gastrointestinal upset, allergic skin disturbances, alcohol intolerance, and ringing, buzzing or roaring in the ears. If severe and continued reactions to the drug occur, its use should be discontinued.

Dosage

The proper oral dose of this drug for the control of diabetes mellitus must be determined by experimentation to establish the needs of the individual patient. A typical course of therapy is as follows: 3 Gm. (6 tablets) the first day, 2 Gm. (4 tablets) the second day, 1 Gm. (2 tablets) the third day, and 0.5 Gm. (1 tablet) the fourth day. The daily maintenance dose is set at the minimal but still efficacious level (usually 0.5 to 1.5 Gm. daily).

Similar Preparations

Chlorpropamide (Diabenese)
Insulin Injection, USP
Phenformin Hydrochloride (DBI)

TRIPELENNAMINE HYDROCHLORIDE TABLETS, USP

50 mg. (¾ gr.) (Pyribenzamine Hydrochloride Tablets)

Category

Antihistaminic.

Action

Tripelennamine antagonizes the edemic actions of histamine and some of its constrictor actions on smooth muscle, particularly the bronchiolar spasm. It provides symptomatic relief from many allergic-type reactions, suppresses motion sickness, and has a local anesthetic action.

Uses

This drug is effective in providing symptomatic relief of hay fever, asthma, constitutional desensitization reactions, drug reactions, vasomotor rhinitis, urticaria, and many other allergic conditions.

Cautions

Drowsiness is a common side effect of this drug. Patients should not engage in any activities in which safety requires mental alertness until it is determined that this side effect is not produced by the dosage of tripelennamine being administered. The sedative effect may be counteracted with small doses of central nervous system stimulants such as one of the amphetamines or caffeine. Occasionally hypersensitivity to tripelennamine may be encountered. Severe untoward reactions call for discontinuance of its use. Hypnotics, sedatives, and tranquilizers should be administered with caution to patients receiving tripelennamine.

Because of the bitter taste of this drug and its local anesthetic action, tablets should be swallowed whole.

Side Effects

In addition to the sedative effect discussed under *Cautions* above, gastric discomfort, nausea, dryness of mouth, and vertigo may be experienced as side effects from the use of this drug.

Dosage

The usual dose of tripelennamine hydrochloride is 50 mg. (1 tablet), 2 or 3 times a day. The minimum dose required to control allergic symptoms should be determined by experimentation with the individual patient. As little as 25 mg. (½ tablet) daily may be sufficient, or as much as 600 mg. (12 tablets) daily in divided doses may be required. For children, smaller doses are usually adequate.

Similar Preparations

Chlorcyclizine Hydrochloride, USP (Perazil)
Chlorpheniramine Maleate, USP (Chlor-Trimeton Maleate)
Diphenhydramine Hydrochloride, USP (Benadryl Hydrochloride)
Doxylamine Succinate, USP (Decapryn Succinate)
Meclizine Hydrochloride, USP (Bonine Hydrochloride)
Phenindamine Tartrate, USP (Thephorin Tartrate)
Promethazine Hydrochloride, USP (Phenergan Hydrochloride)
Pyrilamine Maleate, USP (Neo-Antergan Maleate)
Tripelennamine Citrate, USP (Pyribenzamine Citrate)

TUBOCURARINE CHLORIDE INJECTION, USP

3 mg. (1/20 gr.) per ml., 10 ml. bottle

Category

Skeletal muscle relaxant.

Action

Tubocurarine is a neuromuscular blocking agent possessing actions typical of curare. It inhibits the transmission of nerve impulses to skeletal muscle and thus produces muscular relaxation without significant nervous system depression. The muscles of respiration are the most resistant to its action.

Uses

Chief use is to supplement inhalation or thiopental anesthesia thus providing adequate skeletal muscular relaxation with relatively smaller amounts of the primary anesthetic agent. It is also used to decrease severity of muscle contractions during shock therapy, and in small doses is used in diagnosis of myasthenia gravis.

Cautions

WARNING: This is a dangerous drug which can cause respiratory paralysis and death if misused. It should be administered only by an anesthetist or other personnel specifically trained in its use. Facilities for positive-pressure respiration with oxygen must be available for immediate use during its administration. Edrophonium chloride or neostigmine methlysulfate administered parenterally are used to counteract the effects of tubocurarine when required. The use of tubocurarine is counterindicated in patients with myasthenia gravis (except as a diagnostic agent in small doses), advanced pulmonary disease, respiratory depression or deficiencies, renal dysfunction, or hepatic disease.

Side Effects

Hypotension and bronchiospasm by release of histamine from tissues may occur during the use of this product.

Dosage

The usual dose of tubocurarine chloride required to produce proper muscular relaxation during anesthesia for surgery or reduction of fractures is 6 to 9 mg. (2 to 3 ml.) injected intravenously. This may be followed in 5 minutes by an additional 3 to 5 mg. (1 to 2 ml.) if necessary. A third dose of 1.5 to 2 mg. (0.5 to 0.7 ml.) may be used after about 45 minutes in long operations. Individual patients may require a modified schedule of dosage depending upon weight, age, individual susceptibility, and the anesthetic being used. Particularly during ether anesthesia smaller doses may be adequate because of this anesthetic's potentiating action on tubocurarine.

In shock therapy, the dose of tubocurarine is 0.025 mg. per pound of body weight administered slowly (over 30 to 60

seconds). In the diagnosis of myasthenia gravis the dose should be only 1/40 to 1/10 of this amount. For the latter test the action is terminated after 2 or 3 minutes with edrophonium chloride injection or an injection containing 1.5 mg. of neostigmine methylsulfate and 0.6 mg. of atropine sulfate.

Similar Preparations

Decamethonium Bromide (Syncurine)
Dimethyl Tubocurarine Chloride (Mecostrin Chloride)
Dimethyl Tubocurarine Iodide, NF (Metubine Iodide)
Gallamine Triethiodide (Flaxedil)
Succinylcholine Chloride, USP

WATER FOR INJECTION, STERILE, USP

5 ml. ampul

Category

Injection vehicle.

Action

This product is a sterile, pyrogen-free, distilled water suitable for use as a vehicle in preparing injections for parenteral use.

Uses

Sterile water for injection is used in preparing solutions of hypodermic tablets, powders, or crystals for parenteral injection. It is also used for diluting aqueous base injections to lower strengths as required and for preparing sterile ophthalmic solutions.

Cautions

The entire contents of the ampul should be used immediately after opening. Any excess not required should be discarded, as this product does not contain a bacteriostatic agent.

Injections prepared with water as the vehicle are likely to be hypotonic unless the material dissolved is sufficient to attain isotonicity of the final solution. If isotonicity of the injected solution is important (as with large volume injections), Sodium Chloride Injection should be used as the vehicle in place of Sterile Water for Injection.

Side Effects

None, except for effects of hypotonicity mentioned under *Cautions* above.

Dosage

Not applicable; dosage will be based on active ingredients used in preparing the solution.

Similar Preparations

Dextrose Injection, USP, 5%
Sodium Chloride Injection, USP

ZINC OXIDE, USP

Category

Astringent; protective.

Action

Zinc oxide has mild astringent, protective, and antiseptic actions when applied externally in the form of a powder or as an ingredient in a prepared ointment or paste. It is included in the Packaged Disaster Hospital primarily for its utility as an ingredient in preparing a dental cement for temporary fillings for teeth.

Uses

Zinc oxide can be used as a dusting powder or for the preparation of ointments or pastes for use in the treatment of various skin diseases and infections, such as eczema, impetigo, ringworm, pruritis, psoriasis, bed sores, diaper rash, and varicose ulcers.

It is used in dentistry with eugenol to prepare a dental-protective cement for use in making pulp cappings or temporary fillings or for use as a temporary adhesive for affixing detached crowns.

Cautions

This product is not intended for internal use. Care should be taken to avoid inhalation of the dust. Do not use on mucous membranes.

Side Effects

None if used externally.

Dosage

Apply locally in small amounts and spread gently to cover affected skin area.

For dental use, mix the zinc oxide thoroughly with sufficient eugenol to form a thick, putty-like paste and apply to teeth as required. (See *Eugenol.*)

Similar Preparations

Calamine, USP
Magnesium Stearate, USP
Talc, USP
Zinc Oxide Ointment, USP
Zinc Oxide Paste, USP
Zinc Stearate, USP

ZINC OXIDE OINTMENT, USP

Category

Astringent; protective.

Action

This product is a petrolatum base ointment having a mild astrin-

gent, protective and antiseptic action due to its zinc oxide content. The petrolatum provides an emollient action.

Uses

Zinc oxide ointment is used as an external application in the treatment of skin diseases, infections, and minor burns. It can be used in treating eczema, impetigo, ringworm, pruritis, psoriasis, bed sores, and varicose ulcers.

Cautions

Do not use internally or on mucous membranes. Store the ointment in a cool place to avoid separation of the ingredients.

Side Effects

None.

Dosage

Gently spread a thin coating of the ointment over the affected area, repeating as required.

Similar Preparations

Calamine, USP
Magnesium Stearate, USP
Talc, USP
Zinc Oxide Paste, USP
Zinc Stearate, USP

TABLES OF WEIGHTS AND MEASURES

Metric Weight

1 kilogram (kg.) _____ = 1000 grams
1 gram (Gm.) _____ = 1000 milligrams
1 milligram (mg.) _____ = 1000 micrograms (mcg.)

Avoirdupois Weight (avdp.)

1 pound (lb.) _____ = 16 ounces ___ = 7000 grains
1 ounce (oz.) _____ = 437.5 grains (gr.)

Apothecaries Weight (apoth.)

1 pound (lb. apoth.) _____ = 12 ounces ___ = 5760 grains
1 ounce (oz. apoth.) _____ = 8 drams ____ = 480 grains
1 dram (dr. apoth.) _____ = 3 scruples __ = 60 grains
1 scruple (sc. apoth.) _____ = 20 grains (gr.)

Metric Fluid Measure

1 liter (l.) _____ = 1000 milliliters
1 milliliter (ml.) _____ = 1 cubic centimeter (cc.) (approx.)

U.S. Fluid Measure

1 gallon (gal.) _____ = 4 quarts ____ = 231 cubic inches
1 quart (qt.) _____ = 2 pints _____ = 32 fluid ounces
1 pint (pt.) _____ = 16 fluid ounces
1 fluid ounce (fl. oz.) _____ = 8 fluid drams
1 fluid dram (fl. dr.) _____ = 60 minims (min.)

Other Fluid Measures

1 cup _____ = 8 fluid ounces
1 fluid ounce __ = 2 tablespoons = 6 teaspoons
1 tablespoon __ = 3 teaspoons
1 teaspoon ____ = 5 ml. (approx.)

Frequently Used Conversion Factors

1 gr. (avdp. or apoth.)	=	64.8 mg.
1 Gm.	=	15.43 gr.
1 oz. (avdp.)	=	28.35 Gm.
1 lb. (avdp.)	=	453.6 Gm.
1 fl. oz.	=	29.57 ml.
1 pt.	=	437.2 ml.
1 qt.	=	946.3 ml.
1 gal.	=	3,785 ml.
1 ml.	=	20 drops (USP standard)

Temperature Conversion Factors

F = Temperature in degrees Fahrenheit

C = Temperature in degrees Centigrade

$F = 9/5C + 32 \quad = 9/5(C + 40) - 40$

$C = 5/9(F - 32) \quad = 5/9(F + 40) - 40$

Average normal body temperature = 98.6°F. or 37°C.

PDH PHARMACEUTICALS WITH MAJOR THERAPEUTIC CATEGORIES

Acetylsalicylic acid tablets
Analgesic

Albumin, normal human serum
Blood-volume replenisher

Alcohol, denatured
Rubefacient ingredient

Aluminum hydroxide gel, dried, tablets
Antacid

Atropine sulfate ophthalmic ointment
Mydriatic

Atropine sulfate tablets
Parasympatholytic

Bacitracin ointment
Antibiotic

Barium sulfate
Radiopaque medium (alimentary)

Benzalkonium chloride solution
Local anti-infective

Bismuth subcarbonate tablets
Antacid; astringent

Boric acid ophthalmic ointment
Antibacterial

Calcium chloride injection
Electrolyte replenisher; cardiotonic

Cascara sagrada extract tablets
Cathartic

Chloramphenicol capsules
Antibiotic

Chloroform
General anesthetic

Chlorpromazine hydrochloride injection
Tranquilizer

Chlorpromazine hydrochloride tablets
Tranquilizer

Dextran injection
Non-protein plasma extender

Dextrose and sodium chloride injection
Fluid, nutrient, and electrolyte replenisher

Dextrose injection, 5%
Fluid and nutrient replenisher

Dextrose injection, 10%
Diluent for spinal anesthetic

Dextrose injection, 50%
Dehydrating agent; diuretic

Digitoxin tablets
Cardiotonic

Digoxin injection
Cardiotonic

Diphenylhydantoin sodium capsules
Anticonvulsant

Edrophonium chloride injection
Curare antagonist

Enteral feeding formula
Nutritional supplement

Ephedrine sulfate capsules
Sympathomimetic

Ephedrine sulfate injection
Sympathomimetic

Epinephrine injection
Sympathomimetic

Ergonovine maleate tablets
Oxytocic

Ether
General anesthetic

Eugenol
Dental obtundant

Hydrocortisone sodium succinate, sterile
Adrenocortical steroid (glucogenic type)

Hydrocortisone tablets
Adrenocortical steroid (glucogenic type)

Hydroxyzine hydrochloride injection
Psychotherapeutic agent

Insulin injection
Prompt-acting insulin preparation

Insluin, isophane, suspension
Intermediate-acting insulin preparation

Insulin, protamine zinc, suspension
Prolonged-acting insulin preparation

Isopropyl alcohol
Antiseptic; rubefacient

Levarterenol bitartrate injection
Sympathomimetic

Lidocaine hydrochloride and epinephrine injection
Local anesthetic (dental)

Lidocaine hydrochloride injection, 1%
Local anesthetic

Lidocaine hydrochloride injection, 2%
Local anesthetic

Lidocaine ointment
Local anesthetic

Lubricant, surgical, jelly
Surgical lubricant

Mercaptomerin sodium, sterile
Diuretic

Metaraminol bitratrate injection
Sympathomimetic

Methimazole tablets
Thyroid inhibitor

Methoxamine hydrochloride injection
Sympathomimetic (vasopressor)

Nalorphine hydrochloride injection
Narcotic antagonist

Neostigmine methylsulfate injection
Cholinergic

Nikethamide injection
Central nervous system stimulant

Nitrous oxide
General anesthetic

Oxygen
Respiratory drug

Oxytetracycline-polymyxin B ophthalmic ointment
Ophthalmic antibiotic

Oxytetracycline-polymyxin B ear drops
Otic antibiotic

Oxytetracycline tablets
Antibiotic; antiprotozoan

Penicillin G for injection
Antibiotic

Penicllin G, Procaine
Antibiotic

Penicillin G tablets
Antibiotic

Pentobarbital sodium tablets
Hypnotic; sedative

Petrolatum, liquid
Laxative

Petrolatum, white
Oleaginous ointment base

Phenobarbital tablets
Hypnotic; sedative

Physostigmine sulfate ophthalmic ointment
Cholinergic (ophthalmic)

Pituitary, posterior, injection
Posterior pituitary hormone (mixed)

Potassium chloride solution
Electrolyte replenisher

Procainamide hydrochloride injection
Cardiac depressant (anti-arrhythmic)

Promethazine hydrochloride injection
Antihistaminic

Quinidine sulfate tablets
Cardiac depressant (anti-arrhythmic)

Ringer's injection, lactated
Fluid and electrolyte replenisher

Scopolamine hydrobromide tablets
Central nervous system depressant; parasympatholytic

Soap, surgical
Local anti-infective; detergent

Sodium bicarbonate tablets
Antacid

Sodium chloride injection, 5 ml.
Injection vehicle

Sodium chloride injection, 1000 ml.
Fluid and electrolyte replenisher

Sodium chloride-sodium bicarbonate mixture
Fluid and electrolyte replenisher

Sodium chloride tablets
Electrolyte replenisher; normal saline ingredient

Sponge, absorbable gelatin
Local hemostatic

Streptomycin sulfate
Antibiotic

Succinylcholine chloride injection
Skeletal muscle relaxant

Succinylsulfathiazole tablets
Antibacterial

Sulfadiazne tablets
Antibacterial

Tetanus antitoxin
Biologic for prophylaxis and treatment of tetanus

Tetanus toxoid, adsorbed
Specific immunization agent for tetanus

Tetracaine hydrochloride, sterile
Spinal anesthetic

Tetracaine hydrochloride tablets
Local anesthetic

Tetracaine ophthalmic ointment
Local anesthetic

Tetracycline hydrochloride for injection
Antibiotic

Thiopental sodium for injection
General anesthetic

Tolbutamide tablets
Hypoglycemic

Tripelennamine hydrochloride tablets
Antihistaminic

Tubocurarine chloride injection
Skeletal muscle relaxant

Water for injection, sterile
Injection vehicle

Zinc oxide
Astringent; protective

Zinc oxide ointment
Astringent; protective

THERAPEUTIC CATEGORIES WITH CORRESPONDING PDH PHARMACEUTICALS

Adsorbent
- Aluminum hydroxide gel, dried, tablets
- Bismuth subcarbonate tablets

Alkalizer
- (See *Antacid*)

Analgesic
- Acetylsalicylic acid tablets

Anesthetic, general
- Chloroform
- Ether
- Nitrous oxide
- Thiopental sodium for injection

Anesthetic, local
- Lidocaine hydrochloride and epinephrine injection
- Lidocaine hydrochloride injection, 1%
- Lidocaine hydrochloride injection, 2%
- Lidocaine ointment
- Tetracaine hydrochloride tablets
- Tetracaine ophthalmic ointment

Anesthetic, local, dental
- Lidocaine hydrochloride and epinephrine injection

Anesthetic, spinal
- Tetracaine hydrochloride, sterile

Anesthetic, spinal, diluent for
- Dextrose injection, 10%

Antacid
- Aluminum hydroxide gel, dried, tablets
- Bismuth subcarbonate tablets
- Sodium bicarbonate tablets

Antiallergenic
- Ephedrine sulfate capsules
- Ephedrine sulfate injection
- Hydrocortisone sodium succinate, sterile
- Hydrocortisone tablets

Antiarthritic
- (See *Antirheumatic*)

Antiasthmatic
- Ephedrine sulfate capsules
- Ephedrine sulfate injection

Antibacterial
- Boric acid ophthalmic ointment
- Succinylsulfathiazole tablets
- Sulfadiazine tablets
- (Also see *Antibiotic*)

Antibiotic
- Bacitracin ointment
- Chloramphenicol capsules
- Oxytetracycline tablets
- Penicillin G for injection
- Penicillin G, procaine
- Penicillin G tablets
- Streptomycin sulfate
- Tetracycline hydrochloride for injection

Antibiotic, ophthalmic
- Oxytetracycline-polymyxin B ophthalmic ointment

Antibiotic, otic
- Oxytetracycline-polymyxin B ear drops

Anticonvulsant
- Diphenylhydantoin sodium capsules
- Pentobarbital sodium tablets
- Phenobarbital tablets

Antidiabetic
- (See *Hypoglycemic*)

Antidiarrheal
- Bismuth subcarbonate tablets

Antiemetic
- Hydroxyzine hydrochloride injection
- Promethazine hydrochloride injection

Antiepileptic
- Diphenylhydantoin sodium capsules
- Phenobarbital tablets

Antiglaucomic
- Physostigmine sulfate ophthalmic ointment

Antihistaminic
- Hydroxyzine hydrochloride injection
- Promethazine hydrochloride injection
- Tripelennamine hydrochloride tablets

Anti-infective, local
- Alcohol, denatured
- Bacitracin ointment
- Benzalkonium chloride solution
- Isopropyl alcohol
- Soap, surgical

Anti-infective, systemic
- (See *Antibiotic*, *Antiprotozoan*, and *Antibacterial*)

Anti-inflammatory agent
- Hydrocortisone sodium succinate, sterile
- Hydrocortisone tablets

Antinauseant
- Chlorpromazine hydrochloride injection
- Chorpromazine hydrochloride tablets

Antiprotozoan
- Oxytetracycline tablets
- Tetracycline hydrochloride injection

Antipyretic
- Acetylsalicylic acid tablets

Antirheumatic
- Acetylsalicylic acid tablets
- Hydrocortisone sodium succinate, sterile
- Hydrocortisone tablets

Antiseptic
- (See *Anti-infective, local*)

Antispasmodic
- Atropine sulfate tablets
- Chlorpromazine hydrochloride injection
- Chlorpromazine hydrochloride tablets
- Diphenylhydantoin sodium capsules
- Pentobarbital sodium tablets
- Phenobarbital tablets

Antitubercular
- Streptomycin Sulfate

Astringent
- Bismuth subcarbonate tablets
- Zinc oxide
- Zinc oxide ointment

Biologic
- Tetanus antitoxin
- Tetanus toxoid, adsorbed

Blood-protein replenisher
- Albumin, normal human serum

Blood-volume replenisher
- Albumin, normal human serum

Cardiac depressant (anti-arrhythmic)
- Procainamide hydrochloride injection
- Quinidine sulfate tablets

Cardiac stimulant
- (See *Cardiotonic*)

Cardiotonic
- Calcium chloride injection
- Digitoxin tablets
- Digoxin injection
- Epinephrine injection
- Levarterenol bitartrate injection
- Metaraminol bitartrate injection

Cathartic
- Cascara sagrada extract tablets (See *Laxative*)

Central nervous system depressant
- Scopolamine hydrobromide tablets

Central nervous system stimulant
- Ephedrine sulfate capsules
- Ephedrine sulfate injection
- Nikethamide injection

Cholinergic
- Edrophonium chloride injection
- Neostigmine methylsulfate injection

Cholinergic (ophthalmic)
- Physostigmine sulfate ophthalmic ointment

Curare antagonist
- Edrophonium chloride injection

Cycloplegic
- Atropine sulfate ophthalmic ointment
- Atropine sulfate tablets

Dehydrating agent
- Dextrose injection, 50%

Demulcent
- Lubricant, surgical, jelly

Dental cement ingredients
- Eugenol
- Zinc oxide

Dental obtundant
- Eugenol

Detergent
- Soap, surgical

Desinfectant
- (See *Anti-infective, local*)

Diuretic
- Dextrose injection, 50%
- Mercaptomerin sodium, sterile

Electrolytic replenisher
- Calcium chloride injection
- Dextrose and sodium chloride injection
- Potassium chloride solution
- Ringer's injection, lactated
- Sodium chloride injection, 1000 ml.
- Sodium chloride-sodium bicarbonate mixture
- Sodium chloride tablets

Emollient
- Boric acid ophthalmic ointment
- Petrolatum, white
- Zinc oxide ointment

Fluid and electrolyte replenisher
- Ringer's injection, lactated
- Sodium chloride injection, 1000 ml.
- Sodium chloride—sodium bicarbonate mixture

Fluid and nutrient replenisher
- Dextrose injection, 5%

Fluid, nutrient, and electrolyte replenisher
- Dextrose and sodium chloride injection

Fluid replenisher
- Dextrose and sodium chloride injection
- Dextrose injection, 5%
- Ringer's injection, lactated
- Sodium chloride injection, 1000 ml.
- Sodium chloride-sodium bicarbonate mixture

Glucose
- (See *Dextrose*)

Hemostatic, local
- Epinephrine injection
- Sponge, absorbable gelatin

Hiccup suppressant
- Chlorpromazine hydrochloride injection
- Chlorpromazine hydrochloride tablets

Hypnotic
- Pentobarbital sodium tablets
- Phenobarbital tablets
- Scopolamine hydrobromide tablets

Hypoglycemic
- Insulin injection
- Insulin, isophane, suspension
- Insulin, protamine zinc, suspension
- Tolbutamide tablets

Injection vehicle
- Sodium chloride injection, 5 ml.
- Water for injection, sterile

Insulin preparation, intermediate acting
- Insulin, isophane, suspension

Insulin preparation, prolonged acting
- Insulin, protamine zinc, suspension

Insulin preparation, prompt acting
- Insulin injection

Laxative
- Cascara sagrada extract tablets
- Petrolatum, liquid

Mydriatic
- Atropine sulfate ophthalmic ointment
- Atropine sulfate tablets
- Scopolamine hydrobromide tablets

Myotic
- Physostigmine sulfate ophthalmic ointment

Narcotic antagonist
- Nalorphine hydrochloride injection

Nerve gas antidote
- Atropine sulfate tablets

Neuromuscular blocking agent
- (See *Skeletal muscle relaxant*)

Nutrient replenisher
- Dextrose and sodium chloride injection
- Dextrose injection, 5%

Nutritional supplement
- Enteral feeding formula

Ointment base, oleaginous
- Petrolatum, white

Oral electrolyte
- Sodium chloride-sodium bicarbonate mixture

Oxytocic
- Ergonovine maleate tablets
- Pituitary, posterior, injection

Parasympatholytic
- Atropine sulfate tablets
- Scopolamine hydrobromide tablets

Parasympathomimetic
- Neostigmine methylsulfate injection
- Physostigmine sulfate ophthalmic ointment

Physiological salt solution ingredient
- Sodium chloride tablets

Plasma extender, non-protein
- Dextran injection

Plasmal volume expander
- (See *Plasma extender* and *Blood volume replenisher*)

Posterior pituitary hormone (mixed)
- Pituitary, posterior, injection

Protective
- Petrolatum, white
- Zinc oxide
- Zinc oxide ointment

Psychotherapeutic agent
- Hydroxyzine hydrochloride injection

Radiopaque medium (alimentary)
- Barium sulfate

Respiratory drug
- Oxygen

Respiratory stimulant
- (See *Central nervous system stimulant*)

Rubefacient
- Alcohol, denatured
- Isopropyl alcohol

Sedative
- Pentobarbital sodium tablets
- Phenobarbital tablets
- Promethazine hydrochloride injection
- Scopolamine hydrobromide tablets

Skeletal muscle relaxant
- Succinylcholine chloride injection
- Tubocurarine chloride injection

Skeletal muscle stimulant
- Edrophonium chloride injection

Smooth muscle relaxant
- (See *Parasympatholytic*)

Steroid, adrenocortical (glucogenic type)
- Hydrocortisone sodium succinate, sterile
- Hydrocortisone tablets

Sympathomimetic
- Ephedrine sulfate capsules
- Ephedrine sulfate injection
- Epinephrine injection
- Levarterenol bitartrate injection
- Metaraminol bitartrate injection

Sympathomimetic (vasopressor)
- Methoxamine hydrochloride injection

Thyroid inhibitor
- Methimazole tablets

Tranquilizer
- Chlorpromazine hydrochloride injection
- Chlorpromazine hydrochloride tablets
- Hydroxyzine hydrochloride injection
- Promethazine hydrochloride injection

Vasoconstrictor
- Ephedrine sulfate capsules
- Ephedrine sulfate injection
- Epinephrine injection
- Nikethamide injection

Vasopressor
- Levarterenol bitartrate injection
- Metaraminol bitartrate injection
- Methoxamine hydrochloride injection
- Pituitary, posterior, injection

Zinc oxide and eugenol cement ingredients
- Eugenol
- Zinc oxide

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Page numbers in lighter type refer to monographs for pharmaceuticals stocked in the Packaged Disaster Hospitals. Italicized page numbers in heavy type refer to entries under Similar Preparations.

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F—Packaged Disaster Hospitals*

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H—Supplies and Equipment

I—Health Manpower

J—Public Water Supply

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